Acceptance and use of online pharmacies and the online customer journey for the purchase of OTC medicines

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Tiivistelmä/Referat – Abstract

Background: Increased use of internet and the development of different services has led into the growth of e-commerce in many sectors and the e-commerce is growing significantly faster than any other economy in Finland. In addition, the search for different health related information from the internet has increased and this has led into increase in the online purchase of different health-related products and services in many countries. However, buying pharmaceutical preparations from online pharmacies have not become that popular in Finland yet, although there are many online pharmacy service providers.

Objective: The aim of this study was to explore the acceptance and use of online pharmacies for the purchase of OTC medicines in Finland. The main purpose was to find out what are drivers and barriers to purchase OTC medicines online and which factors could facilitate to overcome customer perceived barriers. Furthermore, the aim was to investigate online purchase behavior for OTC medicines and to find out the insights required to develop more seamless online customer journey.

Materials and methods: This study was conducted as a combination of quantitative survey and qualitative interview. The target group of this study was 18-74 year-old-people people living at the Greater Helsinki area. The data was collected with an online survey (n=262), one focus group discussion (n=5) and one-to-one interview (n=3). Participants of both, the survey and interviews, were chosen by convenience sampling and they were drawn in via social media, mainly by Facebook, and in co-operation with a few pharmacies in the Greater Helsinki area. Quantitative analysis of the survey was made by using version 25.0 of the IBM Statistical Program for Social Sciences (SPSS) and data obtained with open questions and interviews was analyzed by using conventional deductive content analysis.

Results: In this study sample, 16.5% had bought medicines online. Independence from time and place, convenience and time saving were the biggest drivers to shop OTC medicines online, while the biggest barriers were lack of additional value, high price of the delivery and long delivery time as well as acute nature of the problem. Cheaper price of the medicine was the strongest factor that could get people consider buying online. Results indicate that the online customer journey follows the general five-stage decision making model while purchasing unfamiliar medicines. Internet turned out to be the primary source of information before purchase and self-diagnosis could be made with the help of information found from the internet. In addition, perceptions and experiences of important others and advice from the pharmacist were considered as useful help in the process of self-diagnosis.

Conclusions: Barriers for the purchase are currently dominating over the motivating factors. However, the majority of non-buyers would be ready to consider buying medicines online. Currently, the online pharmacies cannot compete with the prices of the medicines, due to the local regulations, but pricing of other pharmacy products is free and those could work as incentive to buy also medicines online. In addition, it would be worth for online pharmacies to invest on developing quick and reasonably priced delivery services and properly working, real-time chat service as well as further increase awareness of their services. Pharmaceutical companies can improve the customer journey by providing the information consumers usually search at their product pages and already at Google-view as a quick links. In addition, online pharmacies should be provided with sufficient information about their products.

Avainsanat – Nyckelord – Keywords

Online pharmacies, online customer journey, over-the-counter medicine, OTC medicines, drivers and barriers, customer behavior

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Tiivistelmä/Referat – Abstract

Johdanto: Lisääntynyt Internetin käyttö on johtanut verkko-ostamisen yleistymiseen monilla aloilla, ja verkkokaupan kasvu Suomessa on viime vuosina ollut nopeampaa kuin muun kaupan kasvu. Myös erilaisen terveyteen liittyvän tiedon etsintä verkosta on kasvanut, ja monissa maissa tämä on johtanut erilaisten terveyteen liittyvien tavaroiden ja palveluiden verkko-ostamisen kasvuun. Suomessa lääkkeiden osto verkosta ei kuitenkaan ole vielä kovin yleistä, vaikka palveluntarjoajia on useita.

Tutkimuksen tavoite: Tämän tutkimuksen tarkoitus oli tutkia itsehoitolääkkeiden ostamista verkkoapteekeista Suomessa. Tarkemmin määriteltynä tutkittiin tekijöitä, jotka motivoivat tai toimivat esteenä verkkoapteekkien käytölle sekä etsittiin tekijöitä, jotka voisivat auttaa pääsemään yli oston esteistä. Lisäksi tutkittiin verkko-ostokäyttäytymistä OTC lääkkeiden ostoon liittyen tavoitteena löytää kuluttajien näkemyksiä entistä sujuvamman verkko-ostopolun kehittämiseksi.

Aineisto ja menetelmät: Tutkimus toteutettiin kvantitatiivisen kyselytutkimuksen sekä kvalitatiivisten haastatteluiden yhdistelmänä. Tutkimuksen kohderyhmä oli 18-74 vuotiaat pääkaupunkiseudulla asuvat henkilöt. Aineisto kerättiin verkkokyselyn (n=262) sekä haastattelun (n=8) avulla. Osallistujat valittiin mukavuusotannalla ja heitä houkuteltiin mukaan hyödyntämällä sosiaalista mediaa sekä yhteistyössä muutamien pääkaupunkiseudun apteekkien kanssa. Aineiston kvantitatiivinen analyysi suoritettiin IBM:n SPSS version 25.0 avulla ja avoimista kysymyksistä sekä haastatteluista saatu aineisto analysoitiin teorialähtöistä sisällönanalyysiä hyödyntäen.

Tulokset: Tässä tutkimuksessa noin joka kuudes (16.5%) oli ostanut lääkkeitä verkkoapteekista. Riippumattomuus ajasta ja paikasta, kätevyys ja ajansäästö olivat suurimmat ostomotivaattorit, kun taas lisäarvon puute, toimituksen korkea hinta sekä pitkä toimitusaika ja tarpeen akuutti luonne toimivat esteinä itsehoitolääkkeiden ostamiselle verkkoapteekista. Lääkkeen edullisempi hinta oli vahvin tekijä, joka voisi saada kuluttajat harkitsemaan verkkoapteekista ostamista. Tulokset osoittavat, että OTC-lääkkeen verkko-ostopolku noudattaa yleistä viisiportaista ostoprosessin mallia ostettaessa entuudestaan vierasta lääkettä. Ensisijainen tiedonlähde ennen lääkkeen ostamista oli internet, ja itsediagnoosi pystyttiin tekemään internetistä löydetyn tiedon avulla. Tämän lisäksi läheisten ihmisten näkemykset ja kokemukset sekä farmaseutin neuvot koettiin hyödylliseksi avuksi itsediagnosointiprosessissa.

Johtopäätökset: Tällä hetkellä verkko-ostamisen esteet osoittautuivat ajavia tekijöitä hallitsevammaksi. Tästä huolimatta suurin osa heistä, jotka eivät olleet ostaneet verkosta aiemmin olisivat valmiita harkitsemaan ostamista. Paikallisten säännösten vuoksi verkkoapteekit eivät voi tällä hetkellä kilpailla itsehoitolääkkeiden hinnoilla, mutta muiden apteekkituotteiden hinnoittelu on vapaata, ja nämä voisivatkin toimia kannustimena myös lääkkeiden ostamiselle verkosta. Lisäksi verkkoapteekkien olisi hyödyllistä panostaa nopean ja kohtuullisesti hinnoitellun toimituksen sekä hyvin toimivan reaaliaikaisen chat-palvelun kehittämiseen ja kiinnittää huomiota tietoisuuden kasvattamiseen palveluistaan. Lääkeyritykset voisivat osaltaan sujuvoittaa ostopolkua tarjoamalla kuluttajien yleisimmin etsimää tietoa tuotesivuillaan sekä jo Google-näkymässä pikalinkkeinä kuin myös tarjoamalla verkkoapteekeille riittävästi tietoa tuotteistaan.

Avainsanat – Nyckelord – Keywords

Verkkoapteekit, ostopolku verkossa, itsehoitolääke, OTC-lääke, ajurit ja esteet, kuluttajakäyttäytyminen

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ABBREVIATIONS

AESGP Association of the European Self-Medication Industry
AFP Association of Finnish Pharmacies
EEA European Economic Area
FCCA Finnish Competition and Consumer Authority
FIMEA Finnish Medicines Agency
MSAH Ministry of Social Affairs and Health
OFS Official Statistics of Finland
OTC Over the counter drug
PIC Pharmaceutical Information Center
SEM Search engine marketing
SEO Search engine optimization
TAM Technology Acceptance Model
TPB Theory of Planned Behavior
TRA Theory of Reasoned Action
UTAUT Unified Theory of Acceptance and Use of Technology

ABSTRACT

FINNISH ABSTRACT

ABBREVIATIONS

1. INTRODUCTION

Today the use of internet is a significant part of everyday life for many consumers and many products and services are already bought over the internet. Digitalization and the development of different services has speeded up the transfer of commerce increasingly to the internet and more and more people are willing to shop online. According to YouGov (2018), e-commerce is growing significantly faster than any other economy in Finland. According to their report the revenue of Finnish e-commerce is estimated to be 12,2 billion euros in 2018. This means growth of 18 percent in comparison to year 2017. Finnish consumers use most of the money spent on the internet on travelling (47%, 5.7 billion €), goods (36%, 4.4 billion €) and services (17%, 2 billion €). By travelling, money is used mostly on purchasing hotel services and train- and airline tickets, and within services, tickets and digital media are most popular. Clothes and shoes are most popular goods bought online (53%). Also, physical media products (32%) and body- and beauty care products (36%) are quite popular. It is remarkable, that the sales of body- and beauty care products has grown 6% compared to year 2017. According to report this can be explained by increasing interest in health and wellbeing (YouGov, 2018).

According to Official statistics of Finland (OFS) the amount of 16-89-year-old people who have bought goods or services online during the last 3 months was 47% and during the last 12 months 64% (OSF, 2018). Goods or services were purchased most often by people between 35-44 years and 96% of them had purchased something online at least once. The amount of people that has bought something online at least 3 times during the last three months was 31%. According to OFS Finnish people tend to buy clothes or shoes (37%), tickets to concerts, movies or theaters (37%) and accommodation services (34%) online.

In addition to the rise in e-commerce, consumers tend to search health related information from the internet. According to OFS 65% of Finnish 16-89-year-old people reported having searched disease, nutrition and health related information online during the last 3 months (OFS, 2018). With the help of the information found on the internet it is easier for customers to self-diagnose themselves while facing minor health issues. According to

Roblek et al. (2018) customers express three typical online behaviors regarding OTC drugs: Browsing information about OTC medicines without any particular purpose, searching for particular information or product, and buying OTC medicines.

In many countries, information searching behavior has led into increase in the online purchase of different health-related products and services. However, buying pharmaceutical preparations from online pharmacies have not become that popular in Finland yet. Despite the increased interest to shop online in other sectors and the tendency to search health related information from the internet, the amount of Finnish customers who has bought medicines online during the last 3 months was only 3% in 2018. (OFS, 2018). This was the smallest category of all product categories (OSF, 2018). Medicines were bought online most often by 25-34 (6%) and 35-44 (5%) year old consumers. Obviously, there are some specific reasons why Finnish consumers tend not to buy medicines online.

There has been a lot of public discussion about renewing the system by which the license for a pharmacy is given, as well as about renewing the pricing system of medicines. The Finnish Competition and Consumer Authority (FCCA) has proposed that the regulated consumer prices of medicines at pharmacies should be changed into a maximum price, enabling pharmacies to engage in price competition. Currently there are over 100 legal online pharmacies in Finland. The Association of Finnish Pharmacies (AFP) is currently developing online platform with diverse features (AFP, 2018). This platform will be launched later in 2019 and according to the AFP already 200 pharmacies has made an advance order of it, so the amount of online pharmacies is about to double during this year. It seems that many pharmacists believe in growth of e-commerce also in the pharmaceutical sector and that is why this topic is very relevant to explore.

Finnish studies regarding the use of online pharmacies and consumer online buying behavior regarding OTC medicines are not numerous and there is not recent public data available at all. Recent studies are conducted by commercial research companies like Taloustutkimus and the whole data of those studies is not public. So, there is a clear gap in public research in this area and this study will tackle this issue. It is important for the

online pharmacy providers to know what the drivers and barriers for the online pharmacy use are to gain insights into the factors that may influence consumer online shopping behavior. With the help of this information they can develop their services to better meet customer needs and wants. Findings of this study will also be of great use for pharmaceutical companies to design their online marketing strategies and develop co-operation with pharmacies.

I LITERATURE REVIEW

2. FINNISH PHARMACY MARKET

2.1 Finnish pharmacy system

In Finland, medicines are to be sold to the public by pharmacies, subsidiary pharmacies and pharmacy service points. Currently, only OTC nicotine products can be sold from retailers other than pharmacies, e.g. grocery shops and kiosks, under a permit issued by the municipal authorities. Pharmacies are privately owned and licensed. The owner has to be certified Master of Pharmacy and citizen of a European Economic Area. According to the AFP there was 812 pharmacies in Finland by the end of 2017. Of these, 616 are "main" pharmacies and 196 subsidiary pharmacies. In addition to those there was 148 pharmacy service points or medicine cabinets that offer only limited selection of non-prescription drugs. Many pharmacies are also represented online and according to the Fimea list of legal online pharmacies there is 110 online pharmacies at the moment (10.10.2018). In 2017, privately owned pharmacies generated a turnover of EUR 2 356 million (AFP, 2018). Prescription medicines took 80,5%, non-prescription drugs 13,8% and other goods 5,7% of the total sales. According to the Association of the European Self-Medication Industry (AESGP), the sales of non-prescription drugs in Finland has evolved from 246 million € at 2012 to 264 million € at 2017. In 2017 the share of non-prescription drugs was 15,2% of total pharmaceutical market (AESGP, 2018).

There has been a lot of public discussion about renewing the system by which the license for a pharmacy is given and also about renewing the pricing system of drugs. According to Finnish Competition and Consumer Authority (FCCA) the biggest problems with current regulation of the pharmacy sector are barriers to entry into the sector, strict regulation of prices and regulations that impede trade (Valliluoto, 2018). The FCCA proposes that the regulated consumer prices of medicines at pharmacies should be changed into a maximum price, enabling pharmacies to engage in price competition. Price competition should be applied to OTC medicines in the first stage as proposed by the Ministry of Social Affairs and Health (MSAH). In addition, they propose that the legislation should be changed so that licenses for pharmacies would be granted to all applicants that meet legal requirements, and the number and location of pharmacies should not be restricted and any regulations that impede trade should also be done away with. The AFP has also proposed that the amount of permissions to own a pharmacy should be increased and opened for competition.

2.2 Online pharmacies

According to fourth item in section 38 in Finnish Medicines Act (1112/2010), online pharmacy service means the sale of medicinal products on the basis of orders placed by customers over the internet. In Finland the pharmacy sector is very strictly controlled and running an online pharmacy service requires valid pharmacy license issued by the Finnish Medicines Agency (Fimea). According to section 52 b in Finnish Medicines Act (1112/2010) licensed pharmacists and the licensed pharmacies of the University of Helsinki and the University of eastern Finland may provide pharmacy services via an online service. Legally operating Online pharmacy service can be identified by the pan-European logo, about which the European Commission has decreed. According to Finnish Medicines Act (395/1987) every Finnish pharmacy has to use this logo at their online pharmacy service and the Fimea has also decreed about the implementation of this sign 1/2015. The Fimea is maintaining a list of legitimate online pharmacies at their web pages and the pan-European logo at the online pharmacy acts as a link to this list. According to Fimea list of legitimate online pharmacies there are currently 110 legally operating online pharmacies in Finland (Fimea, 2018, situation 10.10.2018). The AFP is currently developing online platform with diverse features (AFP, 2018). This platform will be

launched at spring 2019 and according to the AFP already 200 pharmacies has made an advance order of it, so the amount of online pharmacies is about to double during this year.

A private person can acquire, with some restrictions, medicinal products for his/her personal use also from another countries that belong to the European Economic Area (EEA) by using legally operating suppliers (Finnish Customs, 2018). Purchasing medicines abroad requires great caution though while there are a lot of illegal operators on the market. Legally operating European online pharmacy can be identified by the pan-European logo discussed earlier. Generally, more than 50% of consumers use foreign websites while purchasing goods or services online (YouGov, 2018). Buying things abroad is justified by cheaper prices, broader selection of goods and the fact that the product is not available in Finland.

It is extremely important for Finnish pharmacies to take care of their international competitiveness, although it currently is more expensive to order medicines or other pharmacy products abroad mostly because of the delivery costs. If Finnish online pharmacies cannot meet consumer needs and expectations, consumers can turn to foreign online pharmacies and part of the sales can be lost. It is difficult to evaluate the global amount of online pharmacies or how much Finnish people currently order medicines abroad, while there is not such studies or data available. All in all, there can be found a lot of legal and illegal online pharmacies on the internet internationally and the value of the total market is unknown (Fittler et al., 2018).

The first Finnish online pharmacy services were opened in 2006 (Heinonen, 2013). Initially online pharmacies were allowed to offer only non-medicinal products like cosmetics or vitamins but the reform of the Finnish Medicines Act in 2011 made it possible to purchase also OTC medicines (Finlex, 1987). In principle it could have been possible to buy OTC medicines online already before that, but the legislation was unclear and that is why pharmacists hesitated to start the sales (Heinonen, 2013). The reformed Medicines Act made it possible also to sell prescription medicines online. However, selling of those began not before than November 2012 in the online services of University

of Helsinki and Jämsä Pharmacy because electronic prescription was required to buy prescription medicines online (TS, 2012). Today OTC- and prescription medicines are sold by most of the online pharmacies.

2.2.1 Online medicine purchase process and logistics

Buying medicines online is not that straightforward than many other e-commerce. Online pharmacies have a legislative responsibility to provide customer with an opportunity to consult a pharmacist for information on the correct and safe use of the product (Finlex 1987). In addition to that, different online pharmacy providers have different procedures how to place the order and how the required information is provided, so consumers might feel the purchase process bit confusing.

Purchasing prescription medicines online requires customer to register to the service at least the first time he/she is placing the order and strong identification with the help of electronic banking personal identity codes is also required (Yliopistonapteekki, 2018, apteekkishop, 2018). Required medicinal information can be acquired for example by phone, by using chat- or video-service on site. In some online pharmacies customer firstly chooses prescription medicines she/he is willing to buy, and then gives the pharmacist a permission to get the information regarding those medicines from the Prescription Center. After that customer sends the order to be handled on the pharmacy and the pharmacy then contacts the customer to go through the order and only after that can it be paid. This is not very handy solution, and the order cannot be accomplished at a time. Today it is more common to contact the pharmacist first using chat-service, phone or video connection and the order can be accomplished at once. Customer can then continue shopping non-medicinal products or OTC medicines or proceed to checkout directly.

Purchasing OTC medicines does not require registering to the site of the online pharmacy, and the required information about the product can be acquired for example by phone, using chat-service on site or asking the pharmacy to contact the customer. Customer can also pick a box “I do not need medicinal information” at the shopping cart and by doing that the pharmacy is released from the legal obligation to give the medicinal information.

As the chat-services and video connections have become more common and technology has overall developed, the purchase process for the medicines is easier than it was in the beginning. This may reduce the threshold to use the online pharmacy services.

E-commerce of medicines causes challenges for the logistics also. According to the Finnish Medicines Act, the logistics of medicines should be organized the way that recommended storage temperatures can be secured (Finlex 1987). This means that for example prescription medicine cannot be left to the postbox of the customer because it cannot be made sure that the recommended temperature is maintained also outside in the cold or a hot summer day. Co-operation with companies that offer logistic services has made deliveries a bit easier and today consumer has more delivery options to choose from. Order can be delivered like in any other e-commerce to post office or parcel point of Finnish Post or to customers home by post, Schenker or delivery service of the pharmacy.

According to the AFP later this year it will be possible to get the order delivered at the day of order or to arrange home delivery at a time that is best suitable for the customer (Tiainen, 2019). Today many pharmacies have also their own parcel points in the pharmacy. This *click and collect* -style allows pharmacies to maximize the potential of both their online, and offline retail offerings. Here the customer uses the online service of the pharmacy to search for, order and pay for items and then go to the local pharmacy to collect the item. This saves time for the customer while there is no need to wait for the delivery back home or wait in line in the pharmacy. Parcel points placed outside the pharmacy, for example in a draught lobby or shopping center, gives customer more flexibility while the order can be picked outside the regular opening hours of the pharmacy.

Delivery cost vary from free of charge to around fifteen Euro depending on the provider and method of delivery. In many online pharmacies the delivery is free if the amount of the order exceeds some specific threshold. Some Finnish pharmacies deliver only to Finland, but some provide also international service. Delivery costs to abroad are naturally higher. For example, the online pharmacy service of Itäkeskus Pharmacy,

apteekkishop.fi, delivers orders to EU-area with 13.50 euros and outside the EU with 26 euros (Itäkeskuksen apteekki, 2018).

One of the specific characteristics of the e-commerce of medicines is that medicines bought from online pharmacies can be returned only, if the package is damaged during the delivery or there is a doubt of defect in the medicine (Finlex 1987). This cannot be done while buying from the physical store either, but in the case of e-commerce, the situation is a bit different while the customer cannot physically inspect the product. Especially, with the OTC medicines, it is also highlighted that the customer has the responsibility to make sure that the medicine is suitable for him/her to use, if he/she expresses not needing or wanting to get the medicinal information from the provider.

2.2.2 The extent of use of online pharmacies

In the lack of public research and statistical data, it is very difficult to estimate how big the online pharmacy market in Finland is or how big share it has in comparison to traditional pharmacy market. Medicines are products traditionally bought from physical pharmacy stores and as mentioned earlier, only 3% of Finnish people had bought medicines online in 2018 (OSF, 2018). IROResearch Oy conducted ”Tuhat Suomalaista” -study in 2017, which was commissioned by the AFP, Fimea and Pharmaceutical Information Center (PIC). This study explored Finnish peoples’ attitudes and beliefs of digital healthcare services. According to that study, 19% of Finnish people had used online pharmacy services and 34% considered it either very or quite important to have a possibility for online pharmacy services. Nearly equally many, 29%, considered it not important at all. This study did not reveal how many of those who had used online pharmacies had bought medicines. According to a recent study, made also by IROResearch for the AFP, more than one third of Finnish people consider online pharmacy service to be an important service, but only one fifth had used it (Valliluoto, 2018). According to that study, conducted in October - November 2018, particularly people under 35 year old living in the Greater Helsinki area are those that find online pharmacies useful, which is in line with OSF’s study which states that people between 25-34 year old are the ones buying medicines most often (OFS, 2018).

From these few former studies can be concluded, that people have tended to buy common merchandise rather than OTC- or prescription medicines from online pharmacies. Although there has not been not much call for online pharmacies (with regard to medicines especially), many pharmacies have wanted to be in the front line of digitalization and provide an online service (Soininen, 2016). One reason for the slow growth in online pharmacy services has thought to be the rigidity of the services. But like discussed earlier, the operation models of the online pharmacy services have changed, and certainly they will continually be developing. That is why pharmacies believe in growth of e-commerce also in the pharmaceutical sector.

2.2.3 Drivers for the use of online pharmacies

In todays' life in the fast lane the consumer perceived advantages of the e-commerce are quite undisputed in many sectors. In general, consumers appreciate convenience, selection, price, original services (i.e. services that may be available online but not elsewhere), personal attention, easy and abundant information access and privacy (Ahuja et al., 2003). According to a Finnish study, consumers buy products or services online primarily because it saves time and is easy (YouGov, 2018). Other reasons to shop online were possibility to shop 24/7 and cheaper prices. In addition, consumers appreciate the possibility to buy products they cannot find anywhere else, the ease of comparing prices and broader product range.

In the pharmaceutical sector the consumer-perceived advantages to shop online are more or less the same. Internationally the motivators for the use of online pharmacies have been found to be the flexibility of the service (i.e. possibility to shop where and whenever), convenience and wide product range, (Gurau, 2005; Orizio et al., 2011; Lostakova, 2012; Fittler et al., 2018). The relative privacy or anonymity and inconspicuous delivery of online pharmacies is one important reason to purchase online. In an online setting some customers may have the courage to ask embarrassing questions they wouldn't dare or want to ask face to face and also to purchase products they would not otherwise buy at all. Internationally one big driver for the success of online pharmacies is the cheaper price

of the medicines online (Gurau, 2005; Orizio et al., 2011). As discussed earlier, in Finland the prices of medicines are the same in every pharmacy (excluding nicotine replacement products), and online pharmacies cannot compete with the price compared to brick and mortar pharmacies. In Finland the total price of an online pharmacy order can be higher than it is in a brick and mortar pharmacy cause of the relatively high delivery costs and the price may be seen as a disadvantage rather than advantage. Many online pharmacies offer free delivery though if the total value of the order rises above some limit, but all in all the price is then the same as in traditional pharmacy and cannot be seen as an advantage. Drivers for the use of online pharmacies are put together in TABLE 1.

Online pharmacies are appreciated especially by disabled or housebound consumer and consumers living in isolated rural areas (Gurau, 2005; Fittler et al., 2018). In addition, consumers with hectic lifestyle or those who do not have local pharmacy nearby appreciate online pharmacy services. In Finland the network of brick-and-mortar pharmacies is quite dense compared to many other countries, and most probably the distance is not very common reason for turning to online pharmacies here.

TABLE 1 Drivers and barriers for the use of online pharmacies

Drivers	**Barriers**
Possibility to shop where and whenever	Lack of trust for the e-commerce
Wide product range	Financial risk
Privacy and inconspicuous delivery	Health-related risk
Better prices	Privacy
Ease of buying	Delivery time
Leisureliness of shopping without hurry	Verification of medical compatibility
Ease of comparing product attributes and prices	Follow-up of the medication
The amount of product / medical information	Personal guarantee by the pharmacist for product authenticity
Avoiding rush	Long term familiarity with the favorite pharmacy location

Finnish research on this area is scarce. According to Heinonen (2013) the biggest drivers for the use of online pharmacy was the ease of buying (88%), possibility to shop in peace and without hurry (74%) and the possibility to shop regardless of the time of the day (69%). Other drivers were possibility to compare prices and product attributes, cheap prices, avoiding rush, intimacy and broad product range. Survey for that study was made

in 2010, when there was practically no possibility to buy medicines online, so it cannot be generalized for the purchase of OTC medicines. In addition, the number of respondents was only 121, so results are only suggestive. According to two other studies the main benefits of online pharmacies were the possibility to save time and ability to conduct purchase at home whenever wanted (Hannula 2012, 2015). Hannula studied the adoption and of online pharmacies for purchasing prescription medicines and there were only 4-8 interviewees at her studies, so the results cannot be generalized as such for the purchase of OTC medicines. OTC medicines are generally used only occasionally, and quite often the need arouses quite unpredictably and the medicine is needed quickly. So, the drivers to use online pharmacy for the purchase of OTC medicines are not necessarily the same and need to be studied.

2.2.4 Barriers to use online pharmacies

Even though consumers might have positive attitude and opinion regarding e-commerce, it will not automatically result in regular online purchase behavior (Wiedmann et al., 2010). Despite the several advantages linked to e-commerce, consumers hesitate to buy products that require direct experience, like medicines, online. As discussed earlier, only 3% of Finnish consumers had bought medicines online during the last 3 months in 2018, so there has to be some specific barriers to use online pharmacies.

Ahuja et al. (2003) explored the barriers to shop online in general. According to their findings the largest concern was privacy and security. The second reported barrier was the lack of customer service and the third lack of social interaction. By social interaction can be meant the opportunity to interact with a salesperson, or the perception of shopping as a social activity. Other reasons were expensive price (shipping costs), lack of time and inability to touch and feel the product. In addition, difficult to return, too much information and connection troubles were found to be reported as a barrier for online shopping.

The research in this area is not that numerous in the pharmaceutical sector and there cannot be found any studies concerning the barriers for the use of Finnish online

pharmacies. Most of the international studies explore drivers for the use, not barriers. Simple barrier to use online pharmacies is not knowing those exist, or not knowing that medicines are also available in addition to other health-related products. Another aspect is service characteristics, such as verifying that all medicines used are compatible, follow-up of the medication, personal guarantee by the pharmacist for authenticity of the products or the fact that the local brick-and-mortar pharmacy is well known for a long time (Spain et al., 2001).

One reason for not purchasing medicines online has found to be general lack of trust for the e-commerce (Büttner and Göritz, 2008). For example, senior citizens do not have that much experience on purchasing goods online, and those are the ones using medicines more than younger generation. In addition, financial and especially health related risks are seen as barriers for the use of online pharmacies (Büttner et al., 2006). Risk can be experienced both towards a product and service provider. Facing a financial risk is common in e-commerce and it is generally related to trust in online service provider and fear of not getting the paid product or fear of credit card information not remaining safe. Health related risks are associated with the fear of getting counterfeit medicines, low quality of the medicine or fear that due to limited or nonexistent opportunity for advice the medicine is not suitable for the user, suitable with user's other medicines or adverse effects (Orizio et al., 2011).

Another factor that makes consumers hesitate to buy online is privacy that is the fear of sensitive health-related or other personal information passing on illegally (Büttner et al., 2006). In addition, the delivery time can be a strong barrier for the purchase, especially with acute treatments. Today the delivery time of 2-4 days is common in many online pharmacies in Finland, and in the case of acute treatment this is not quick enough. On the other hand, there is increased number of delivery options available today and delivery during the day of order is also possible, but often reasonably expensive option, however. In the case of OTC-products the medicine is often needed for acute treatment, and the customer do not want to wait for the delivery.

Fittler et al. (2018) studied consumer attitudes of purchasing medications online. According to their study disadvantages of online medicine shopping were the ease of abusing preparations, lack of control (customer can get products they do not need or worsen their condition), lack of product information, delivery time, lack of trust to product source, broad selection (difficulty of choosing the right product), fear of not getting the right or counterfeit medicine and the poor product quality. Study was made for Hungarian patients and hence it cannot be generalized.

2.2.5 Resources and challenges

Most of the community pharmacies are quite small operators in Finland, and often the case is that there are not enough resources to develop the online pharmacy service, and that might be one reason why it has not gained that much popularity yet. However, the number of online pharmacies has increased steadily from year to year and operations are developed little by little, as well as the adoption of opportunities that the e-commerce brings about as a part of the pharmacy business. While many community pharmacies have limited resources, the AFP has developed new digital platform for online pharmacies that utilizes service design and consumer research (Tiainen, 2019). This will bring up new features, such as the ability to order on behalf of someone else, or possibility on quick delivery on the day of order or in some certain time lag.

Online pharmacy services are quite often additional services that brick-and-mortar pharmacies offer in addition to their physical store, but more and more online pharmacies are operating nationwide or even internationally. The lack of price competition in the case of medicines is also a challenge for the growth of e-commerce in the pharmaceutical sector. Without price competition online pharmacies cannot stand out from other online pharmacies or traditional brick-and-mortar pharmacies in this sense. There might be a change coming to this, however, if the prices are released for competition later on as discussed earlier in chapter 2.1.

2.3 Previous studies

There can be found a handful of studies relating to online pharmacy use. Fittler et al. (2018) studied the frequency and attitudes of patients purchasing medications online in Hungary. They used constructs of attitudes towards main supply chain channels, perceived benefits and disadvantages as factors influencing the online medication purchases. Abanmy et al. (2017) explored the extent and reasons behind the use of online pharmacies in Saudi-Arabia. Yang et al. (2001) studied service quality attributes of online pharmacies. Advantages and risk associated with online pharmacies are studied by Gurau (2005). Roblek et al. (2018) investigated the determinants of customer behavior regarding OTC drugs online. Büttner et al. (2006) explored the effect of perceived risk in consumer behavior towards online pharmacies.

3. ONLINE CUSTOMER JOURNEY

3.1 Customer journey

Today there is a huge amount of product choices, customers interact with companies through myriad of touch points in multiple channels and media and customer experiences are more social in nature. People continually form perceptions of brands from different touch points, including for example advertisements and conversations with family and friends. That is why customer buying behavior is increasingly complex today and it is extremely important for companies to understand the customer experience throughout the customer journey. Court et al. (2009) state, that "If marketing has one goal, it is to reach consumers at the moments that most influence their decisions". This chapter will explain the concept of the customer journey.

3.1.1 Traditional purchase process model

Consumer behavior and purchase process has been intrigued researchers for many years and there can be found plenty of studies around these themes. First theories about consumer purchase process are traced to the 1960s (Lemon and Verhoef, 2016). Although

these models are developed almost 60 years ago, those are still in a very prominent position and create the basis for modelling the purchase process. One of the well-known and mostly cited model of consumer purchase process is the five-stage model (EKB-model) presented by Engel, Kollat and Blackwell in 1978 (Darley et al., 2010). It is composed of five different stages that consumer is thought to go through during the purchase process. These stages are *problem or need recognition, information search, evaluation of alternatives, product choice and outcomes*.

EKB model is applicable to illustrate the purchase process of medicines, while they are regarded as high-involvement products (Wolny and Charoensuksai, 2014). Medicines are typically products that ordinary people do not know much about, and customers need to acquire as much information as possible to reduce the risk of taking a drug that is not suitable or may risk one's health. This is the case especially concerning the over-the-counter drugs while these can be bought without prescription and one needs (maybe with the help of pharmacist) to decide whether the drug to be chosen is suitable or not. For products that are bought in a routinized manner, like tooth paste, the purchase process is more straightforward and some stages presented above can be entirely skipped.

3.1.2 Stages of the purchase process model

According to the EKB model the purchase process begins with the need or problem recognition (Kotler et al., 2009). Bruner and Pomazal (1988) describe the problem recognition to be based on the interaction between two main components: the desired state and the actual state. By desired state is meant the way a person would like a need to be met, whereas the actual state means the degree to which a perceived need is actually being met. Problem recognition happens, while a significant difference develops between a person's desired state and actual state with respect to a particular want or need. A need or problem can be triggered by internal or external stimulus. Internal stimulus means the basic needs of the individual, like hunger and thirst, and external stimuli refer for example to advertisements or individual feeling envy for goods belonging to someone else. After defining the problem consumer has to choose whether to act or not. According to Bruner and Pomazal (1988) there are 4 reasons not to act. These are insufficient discrepancy, low importance, insufficient resources and insufficient information.

Need or problem recognition is followed by information search. According to Kotler et al. (2009) there can be separated two levels in the information search: heightened attention and active information search. In the case of heightened attention, the consumer is becoming more receptive to information regarding the product. In active information search consumer is actively searching information for example from the internet, friends and retailers. Consumer information sources can be divided into four groups (Kotler et al., 2009). Personal information sources are family members, friends, neighbors and coworkers. Commercial information is available through advertising, websites, salespeople, dealers, packaging and displays. Public information is acquired from mass media and consumer-rating organization and handling, examining and using the product offers experiential information. It depends on the product category and buyer's personal characteristics how much information is acquired from different sources and what is the influence of each of those. By searching information from different sources, the consumer learns, which products there exist at the given product category for his/her need and is able to evaluate alternatives in the next stage of the buying process.

After gathering information from different sources consumer has most probably found many products or services that could satisfy his/her needs. According to Kotler et al. (2009) there can be found many alternative models, by which the consumer evaluates different alternatives. Generally is seen, that consumer makes his/her decision rationally with deliberation. Consumer is trying to find a solution to a specific problem or need and is seeking for specific advantages of a product. Consumer sees every product as a bundle of attributes, and the ability to meet the searched advantages changes from product to product. It depends entirely on product, which product attributes consumer sees interesting. Naturally those attributes that are looked for will get the most attention from the consumer. By evaluating alternatives consumer forms beliefs and attitudes of products and those will affect the purchase behavior. The product that consumer will finally pick can be concluded with the help of Expectancy value-model. Here every attribute gets different weighting coefficient, and the product performance can be evaluated by how well the consumer thinks the product is managing in each attribute. This model is compensatory, and those attributes that are seen as good can subvert those that are seen

bad. After evaluating the alternatives consumer can end up to a situation where he/she has the intention to buy one of the products under evaluation.

While making the actual purchase decision consumer can make up to five different sub-decisions. (Kotler et al., 2009). These are choice of brand, retailer, amount of product, timing and method of payment. Consumer can make the decision by using compensatory models described earlier in the evaluation of alternatives section but quite often the decision is made by using simplifying heuristics. Heuristics are rules of thumb or mental short cuts in the decision process and they are non-compensatory by nature. This means that positive and negative attribute considerations do not necessarily net out. Making the final purchase decision is also affected by opinions and attitudes of others and some unexpected factors, like sudden loss of job or some other purchase that is more important at that moment. However, consumer preferences or even his/her purchase intentions are not completely reliable to predict the actual purchase behavior. According to Kotler (2009) perceived risk has a strong impact on consumers decision to revise, postpone or even avoid purchase decision. Perceived risk will be discussed later.

After the purchase consumer compares his/her expectations of the product to perceived reality and experience consequent satisfaction or dissatisfaction and then act in a way influenced by that satisfaction or dissatisfaction (Kotler et al., 2009). If the consumer is satisfied, he/she is more likely to make a re-purchase and leave good customer ratings and recommend the product to others. Dissatisfied consumer may abandon or return the product. In addition, dissatisfied consumer may complain to the company or just decide to stop buying the product or warn friends or other consumers.

3.1.3 Customer journey approach

Decision making models reflect cognitive drives and depict hierarchical stages customers go through to reach a purchase while customer journey reflects emotional and behavioral drives in addition to cognitive drives (Wolny and Charoensuksai, 2014). The difference between customer journey and decision-making models is that customer journey is cyclic by structure and involve every touchpoint and channel customers engage within a

shopping journey. So, the customer journey describes more the overall customer experience with the brand or company. Lemon and Verhoef (2016) define customer experience as ”a multidimensional construct focusing on a customer’s cognitive, emotional, behavioral, sensorial, and social responses to a firm’s offerings during the customer’s entire purchase journey”.

Customer journey presents a sequence of actors and authorities that a customer or prospect meets moving to the desirable product or service combined with factors which affect the purchase decision (Batra and Keller, 2016). Traditionally these “touch points” have been portrayed through the well-known purchase funnel. A simple version of the funnel is the classic “hierarchy-of-effects” models like the Attention-Interest-Desire-Action (AIDA) -model. These models divide the customer behavior into steps that lead closer to making the purchase decision one at a time. In the funnel model consumer is constantly decreasing the amount of alternatives on his/her way from need recognition to making the purchase decision (FIGURE 1) (Court et al., 2009).

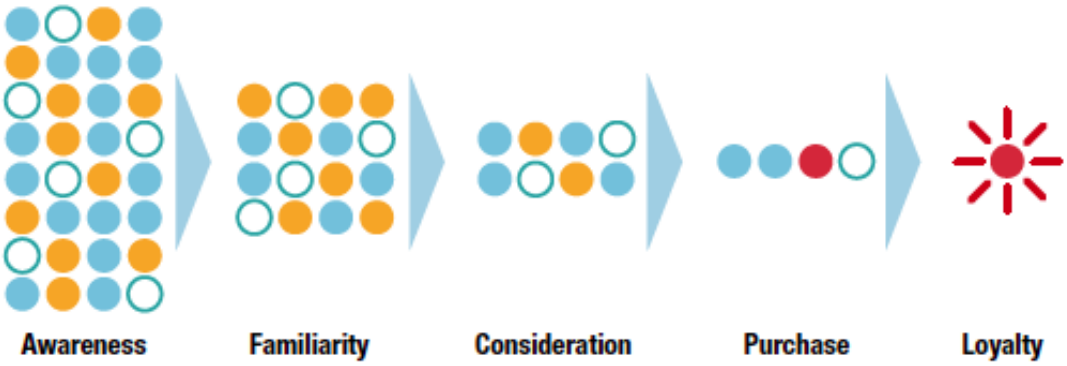

FIGURE 1: The traditional funnel model (Court et al., 2009)

One of the biggest problems with the AIDA-model is, that it does not take in to account what happens after the actual purchase. All post-purchase effects such as satisfaction, dissatisfaction, customer ratings and recommendations remain unaffected (Batra and Keller, 2016). In the pharmaceutical sector there cannot be customer ratings and recommendations of medicines at online pharmacy pages based on the Finnish medicines act, but whether the customer is satisfied or not to consider making a repurchase, is important. Another problem is the linear nature of these models. Today customer will not

necessarily proceed systematically from phase to phase but is rather skipping some phases or may even take steps backwards. After the increase of digital channels and wider product range together with well-informed customer the funnel model is not sufficient to depict all the customer touch points during the customer journey (Court et al., 2009). These notions in mind Court et al. (2009) introduced circular consumer decision journey model that they think better represents current customer behavior (FIGURE 2).

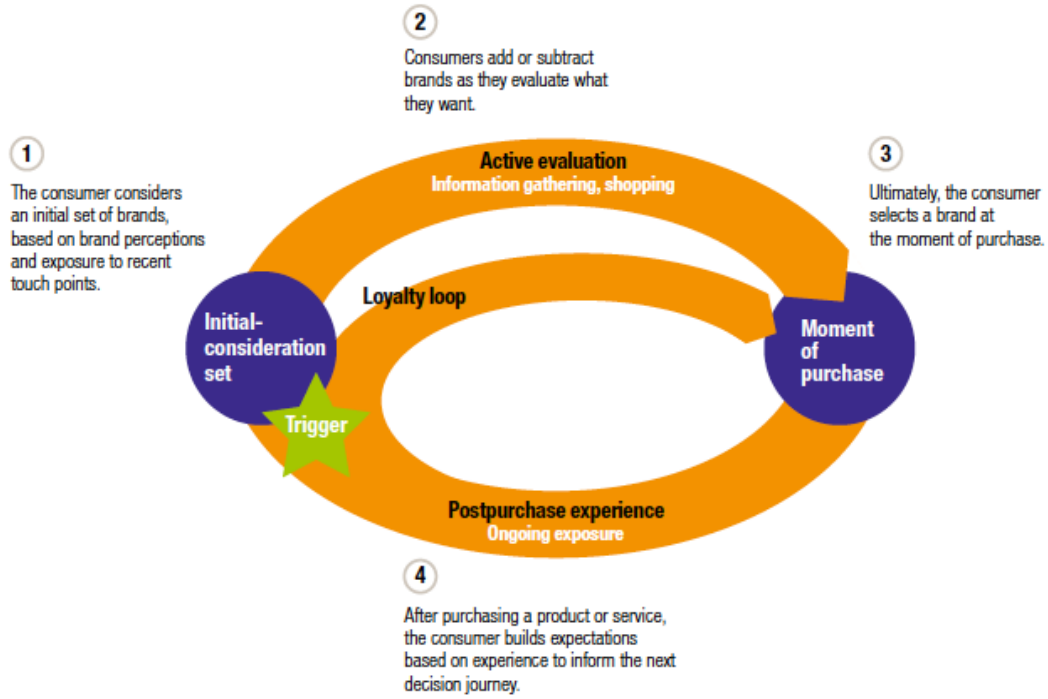

FIGURE 2: The consumer decision journey (Court et al., 2009)

Customer journey model represented by Court et al. (2009) consists of four main phases that resemble the traditional purchase decision model discussed earlier. These four phases are *initial consideration*, *active evaluation* or the process of researching potential purchases, *closure* i.e. when consumers buy brands and *post-purchase* i.e. when consumers experience them. At the first phase consumer is considering the initial set of brands and consideration is based on consumer perceptions about the brand and recent exposure to touch points. At the active evaluation phase consumer is gathering information and evaluating different product alternatives. The number of alternatives may increase, or some may drop out at this phase. At the closure phase consumer chooses the

product at the purchase moment. Finally, in the post-purchase phase, consumer forms perceptions about the product for later use.

Batra and Keller (2016) introduced an expanded, more detailed model of customer decision journey with 12 potential stages. They propose that customer can go through series of stages such as they feel a need or want for the overall category of which the brand is a part, recall the brands they associate with meeting that category-level need, further evaluate a smaller subset of those brands not only with respect to performance quality but also about their trustworthiness, develop a preference and make a tentative choice, decide how much they are willing to pay for the preferred brand, take the action step of a trial or purchase, form an assessment of post-consumption satisfaction with the brand, which determines repurchase intentions and loyalty and hopefully, over time, increase their usage or purchase frequency, engage in post-purchase interactions with the brand and finally become a loyal and willing advocate for it.

To make it simpler, the customer journey can be divided into three phases: *Pre-purchase*, *purchase* and *post-purchase* (Lemon and Verhoef, 2016). The first stage i.e. pre-purchase takes into account all the customer's interaction with the brand, category and environment before the actual purchase. In the traditional purchase process model stages of need recognition, information search and evaluation of alternatives fall into pre-purchase stage. At the purchase stage all the customer interactions with the brand and its environment during the purchase are taken into account. In this stage consumer makes the final choice, ordering and payment. Finally, post-purchase stage covers customer interactions with the brand and its environment after the actual purchase. This stage includes usage and consumption, post-purchase engagement and service requests. Here aspects of the customer's experience that relate to the brand or product/service after purchase are covered.

3.1.4 Touchpoints of the customer journey

A key element in the customer journey are touchpoints. The term touchpoint refers to interactions and exposures that a customer can have with a brand during the customer journey. Customers experience touch points in every stage of the customer journey and

those can be seen as a brand experience across the entire customer purchase process. For example, personal observation and use, word-of-mouth and advertising are regarded as brand touch points (Kotler et al., 2009). For a marketer touch point is an excellent opportunity to engage the consumer while at these points consumers are open to influence (Court et al., 2009; Bommel et al., 2014). Lemon and Verhoef (2016) identify four categories of customer experience touch points, that are *brand-owned, partner-owned, customer-owned* and *social/external/independent touch points* respectively. Customer might interact with each of these touchpoint categories in each stage of the purchase process. It is also important to notice, that all touch points are not equal, but their strength or importance may differ in each stage.

Brand-owned touch points are customer interactions that are designed and managed by the marketer and under the control of the marketer (Lemon and Verhoef, 2016). For example, brand-owned media and brand-controlled elements of the marketing mix fall into this category. Brand-owned media includes brand communications such as all forms of advertising and other forms of promotion, brand websites and social media pages and loyalty programs. Brand-controlled elements are for example attributes of the product, packaging and price. Partner-owned touch points are defined as "customer interactions during the experience that are jointly designed, managed or controlled by the firm and one or more of its partners". Partner can be for example marketing agency or distribution partner and the line between brand-owned and partner-owned touchpoint can be blurry.

In customer-owned touchpoints the marketer or any of its partners has no influence or control (Lemon and Verhoef, 2016). These touch points are customer actions that are part of the overall customer experience, for example customer thinking about his/her needs or desires in the pre-purchase phase. Social/external touch points take into account the role of other people and independent information sources in the customer journey. For example, personal or online word-of-mouth, product review and rating sites and other consumer assessments on comparison sites, forums and on blogging sites may influence the purchase process.

The customer journey is built individually by each customer, so it might be difficult to find out the different steps and stages customers go through during the journey. Touch points can be identified through *customer journey mapping.* It visually depicts the sequence of events through which customers may interact with a company or brand during the entire purchase process and it lists all possible touchpoints customers may encounter (Rosenbaum, 2017). So, customer journey map is a tool used to understand an organization's customer experience. The objective in mapping the customer journey is to enhance the customer experience at every single touchpoint.

3.2 Customer journey for the purchase of OTC medicine

There is not that much academic research on customer journey for OTC medicines. Fox et al. (2016) have introduced the concept of *CareFlow* as the healthcare decision journey (FIGURE 3). They state that "A CareFlow maps a patient's journey from the first awareness of a problem to treatment, examining the factors guiding their decisions at each stage".

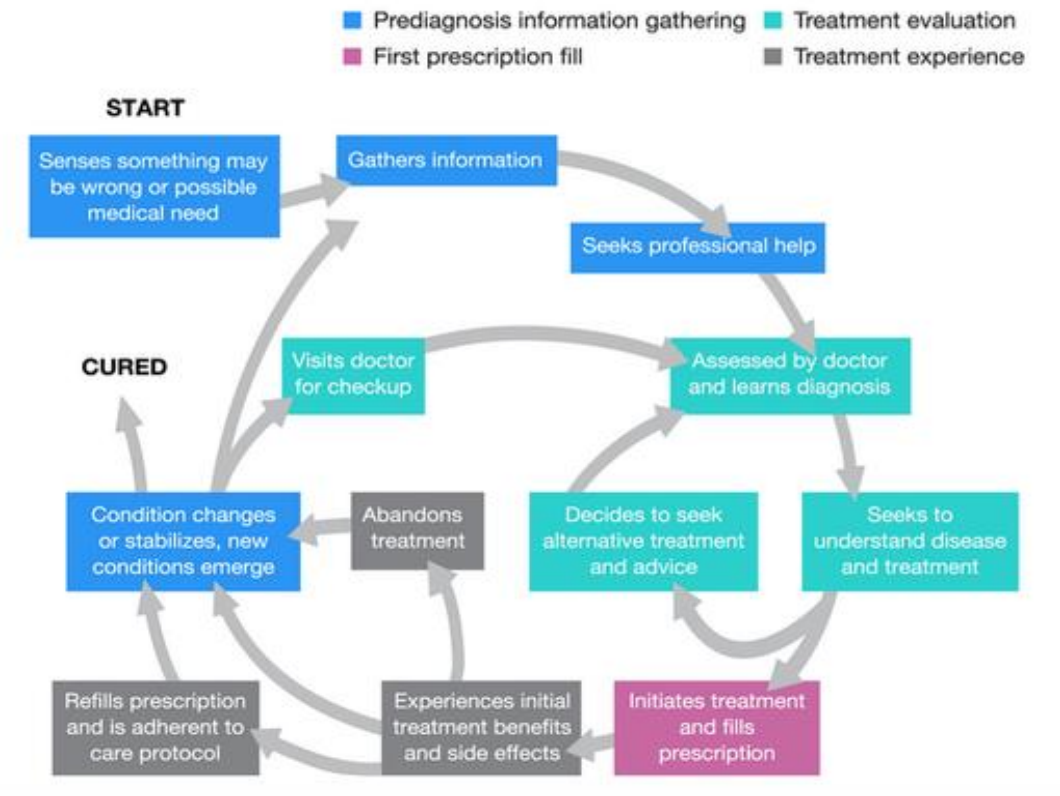

FIGURE 3: CareFlow as the healthcare decision journey introduced by Fox et al. (2016)

According to Fox et al. (2016) typical patient journey consists of five stages, but it has to be noted that patient behaviors and experiences at each point differ by disease and even by patient, so the CareFlow has to be disease specific. Five stages of the CareFlow are *patient's recognition of a problem, information gathering process, evaluating treatment options, beginning of the treatment* and finally *the ongoing treatment*. Within each stage can happen considerable branching and looping. This model is designed for prescription medicines or conditions, where the patient needs assessment from a doctor, but it could be adapted to OTC medicines, too.

3.2.1 Stages of the customer journey for OTC medicine purchase

In this chapter a possible example of a customer journey for OTC medicine purchase is presented (FIGURE 4). It is based on the CareFlow discussed earlier and general stages of the customer journey model. With OTC medicines the recognition of a problem occurs, when person experiences something unusual in his/her state of health. For example, consumer may suddenly suffer from heartburn or he/she may have a sore throat and feeling of catching flu. If the consumer decides to act after defining the problem, consumer engages to search further information of the symptoms from internal or external sources.

According to OFS 65% of Finnish people had searched the Internet for information regarding diseases, nutrition or health during the last three months (OSF, 2018). Health-related information was most often searched by 35-44-year-old people (81%). Fittler et al. (2018) state that the use of Internet for searching health-related information is increasing and estimates around the world are showing that almost 4.5% of Internet searches are related to health-related questions or information. Today consumer is more and more willing to participate on his/her medical care, actively searching information and able to conduct self-diagnosis based on the information found.

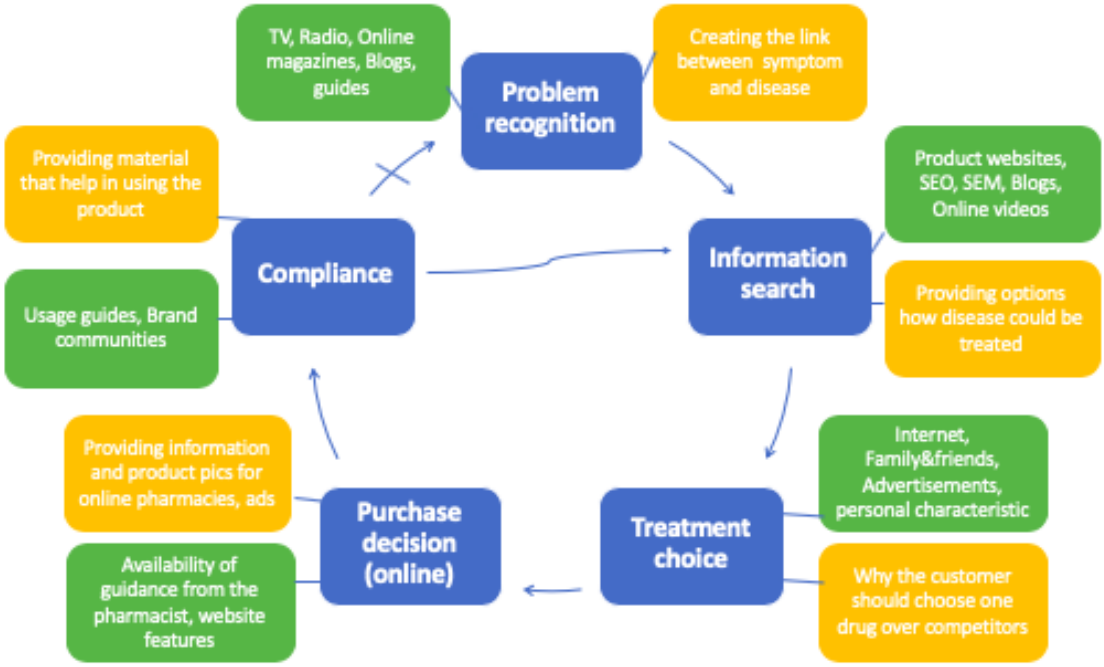

FIGURE 4: Customer journey example for OTC medicine purchase, factors affecting to it (green) and the role of the pharmaceutical company (yellow).

An important thing to notice here is the health literacy. Term refers to persons cognitive and social skills that determine how one is able and willing to achieve, understand and use information in health promotive and supportive way (WHO, 2018). If health literacy is good, person is able to find information and evaluate and compare it critically. In the case of purchasing OTC medicines online, good health literacy is of great advantage or almost necessity, especially if customer does not want to use communication services offered by the online pharmacies.

After gathering information of the symptoms and coming up to a diagnosis, either by him/herself or with the help of an online pharmacist, customer is about to move into treatment choice phase. Here customer might search different treatment options by him/herself or turn to for example online pharmacist to ask for advice. The internet has made the evaluation of alternatives quite quick and easy. While the prices of OTC medicines are the same at every pharmacy and online pharmacy in Finland, so it makes the evaluation even easier. However, it has to be noted that customers do not necessarily know prices being the same everywhere and they may use time for comparison of price.

Finally, customer has proceeded to make the last decisions of which brand and where to purchase. Here customer can again utilize the help of a pharmacist or make the decision on him/her own. Customer may also listen to opinion of others, like family members and friends. According to Srirastava and Wagh (2017) consumer purchase decision of OTC medicines is affected by opinions of others (influencers like doctors, pharmacists and friends), reliability and safety of the product, awareness, corporate image and promotion. They also observed that medicinal factors, aesthetics and producers image have a major influence on purchase of the OTC medicines. In addition, information acquired from the internet, personal bias, price and the number of products available will affect to the product to be chosen.

The last stage of the journey is compliance. After the purchase customer initiates the treatment and experiences initial treatment benefits and possibly some side or adverse effects. This may lead to the stabilization of the condition, or condition may somehow change. In addition, new conditions may emerge. Optimal situation would be that condition stabilizes and the problem is cured. If condition changes, but is not cured, customer re-enters the information search stage and begins the journey again. It is also possible, that after buying the product customer seeks or learns more information which leads abandoning of the treatment and beginning of information gathering process from the start.

3.2.2 Role of the pharmaceutical company during the customer journey

Marketers role is to ease customers journey from one step to another with the aim of the customer to become a loyal buyer of their brand. Customer has different information needs in different steps of the journey, so any one media type is more or less appropriate for deployment to satisfy that information need and ensure movement to the next stage (Batra and Keller, 2016).

Customer need recognition can be emphasized either by creating primary or secondary demand (Solomon et al., 2013). Primary demand creation happens when companies try

to increase peoples' health-consciousness by providing information of diseases. This helps people to recognize their symptoms and to create a link between their symptoms and a certain disease. Further, aim is to get them to search information about products available to this symptom or disease. If people already are aware of their problems or needs, then pharmaceutical companies can create secondary demand by promoting their products that offer solution to this specific problem or need.

At the information search stage the role of pharmaceutical company is to provide sufficient, more detailed product information on their company websites or to provide specific product websites and use informative product advertising. Aim is to provide options of how the disease could be treated. In addition, educative videos on YouTube for example can be used to guide customers. While customers use search engines like Google to gather information, it is critical for pharmaceutical companies to use search engine optimization (SEO) at their websites. Quite often people read only few first links appearing at Google search, so search engine advertising is also important at this stage.

At the treatment choice stage pharmaceutical company should convince the customer to choose their treatment (their product) over other options for the same disease. This can be done using many forms of advertising, such as banner ads and social media advertising. In addition, in other sectors product reviews are used at this phase, but due to regulations in the pharmaceutical sector this is not possible in Finland. The role of pharmaceutical company during the customer journey is summarized at FIGURE 4.

The customer journey of an online store can be divided into 5 key phases: site landing, product discovery, product presentation, cart management and check out (Brugnoli et al., 2015). Only site landing and product presentation are covered here, while pharmaceutical companies cannot influence on product discovery, cart management and check out. Customer can enter the online store in different ways: through search engines, from linked sites such as communication campaigns and third-party websites or by direct access that is typing the address in the URL bar or access from a link in an e-mail newsletter of the online store (Lostakova, 2012; Brugnoli et al., 2015). Communication campaign can be owned by the e-retailer (here the online pharmacy), but it covers also campaigns and

promotions by other companies (here the pharmaceutical company). According to Brugnoli et al (2015), 90% of online store visitors come through search engines. This underlines the importance of search engine optimization (SEO) and – marketing (SEM).

The public research in this area is scarce on the pharmaceutical sector. According to Lostakova et al. (2012) nearly 70% found online pharmacy by using search engine, nearly 22% used access from linked sites and various price comparing sites and only 5% used direct access. One study that explored the customer behavior of Finnish online pharmacies revealed that nearly half of the respondents (48%) used search engine to land the online pharmacy. Other drivers were advertisement (24%), coincidence (18%), recommendation (7%) and information from the online discussion forum (2%) (Heinonen, 2013). However, these studies did not explore how customer was driven to the online pharmacy after seeing an ad or visiting the product web page.

Product presentation refers to the way product is presented at the online store (Brugnoli et al., 2015). Without the physical contact with the product, product presentation has a great effect on customer purchase decision. The information provided by online pharmacies i.e. "product description" is usually based on information provided by pharmaceutical companies. So, it is essential to co-operate with online pharmacies in a way that they make the most of provided information. In addition to clear and sufficient product description, it is important for a pharmaceutical company to make sure that online pharmacy has a good quality picture of the product. Currently the problem is, that every online pharmacy provider updates their web pages on their own, and the quality and relevancy of the information has a lot of variation. Some pharmacies have a designated person to take care of product descriptions, while some other online pharmacies are just trying to do the job as an extramural activity. In this spring there will be an option for pharmaceutical companies to update their product information to many online pharmacies at the same time through service provided by the AFP (AFP, 2018).

No matter what kind of advertising or phase in the customer journey is in question, the ultimate goal of advertising is *conversion* that is to transform a consumer who has noticed the ad into a buyer of the product being advertised (Becker et al., 2009). Pharmaceutical

companies cannot sell medicines by themselves, so the only way to get the consumer to buy the product is to drive him/her to the pharmacy. The important question here is how to drive the potential customer to the online pharmacy after experiencing different brand-owned touch points.

4. ADOPTION OF ONLINE SHOPPING

E-commerce can be seen as an information technological innovation and it has a lot of potential to ease the life of consumers by providing more convenient and efficient way to shop. However, if consumers do not accept and use these innovations those potential positive effects cannot be utilized and the application (here the e-commerce) will not be successful. There can be found several models and theories in the literature that are applied for the purpose of understanding consumer online buying behavior and adoption of online shopping. In this chapter, few of the most often used theories related to online shopping adoption are presented. Finally, two additional constructs related to pharmaceutical sector are discussed.

4.1 IS Acceptance theories

The antecedents of technology acceptance models, theory of reasoned action (TRA) and theory of planned behavior (TPB) are presented first and technology acceptance model (TAM) with its extensions follow.

4.1.1 Theory of reasoned action and theory of planned behavior

A vast amount of studies regarding consumer attitudes, intentions and behavior in the online environment are based on two models from social psychology; Theory of Reasoned action (TRA) and Theory of Planned Behavior (TPB) (FIGURE 5) (Wiedmann et al., 2010). These models have proven successful in predicting and explaining behavior across a wide variety of domains (Yousafzai et al., 2010).

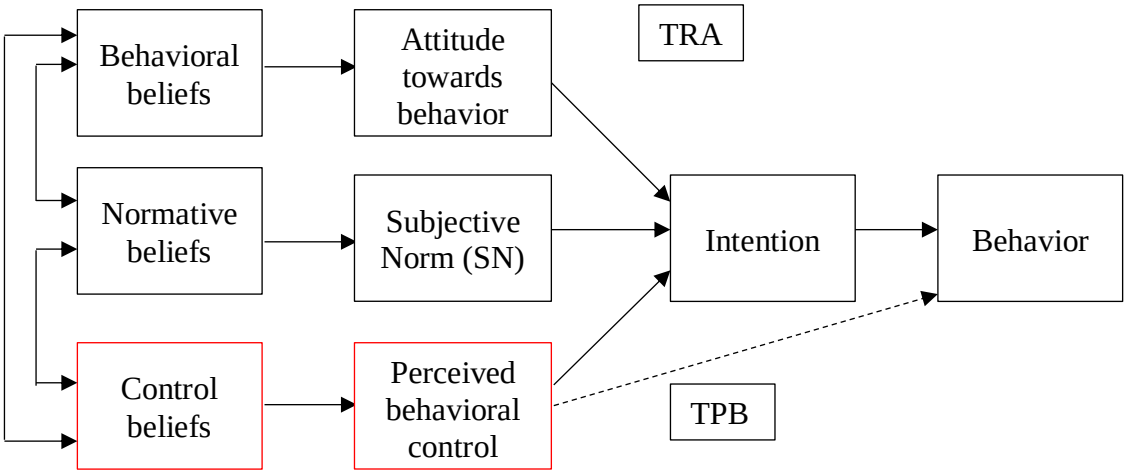

FIGURE 5: Theory of Reasoned action and Theory of Planned behavior (Kotler et al., 2009)

According to TRA consumer purchase behavior is determined by the behavioral *intention* to buy products or services; only if the consumer has the willingness to buy, he/she can actually buy (Davis et al., 1989). Behavioral intention is defined as a measure of strength of consumers intention to perform a specified behavior. In TRA model behavioral intention is a function of *attitude towards the behavior* and *subjective norm* (SN) (FIGURE 5) (Davis et al., 1989). Attitude is the general feeling of how consumer perceives the behavior, whether the behavior is favorable or not. Attitude is based on the consumer's behavioral beliefs that a certain behavior will produce a given outcome multiplied by the evaluation of that outcome. SN is defined as the social influence that is the perceived opinion of referent groups opinions about the behavior in question. SN is based on the normative beliefs held by the consumer, that are perceived expectations of specific individuals or groups, and his/her motivation to comply with those normative beliefs. In the context of online shopping the construct of attitude could be expressed for example as a function of the consumer's belief about an online store's characteristics and the degree of subjective importance a consumer attaches to these attributes whereas subjective norm as a function of how consumer's family or friends view online shopping and how motivated the consumer is to comply with those beliefs.

The TRA does not take into account that the positive attitude towards certain behavior, here the online shopping, does not necessarily lead to actual behavior, if the consumer

perceives the purchase process too complex or do not have resources necessary to perform the given behavior for example (Kotler et al., 2009; Yousafzai et al., 2010). These shortcomings of TRA are taken into consideration in an expansion of the TRA, TPB (FIGURE 5) (Ajzen, 1991). In addition to two key components of TRA, *attitude towards behavior* and *Subjective norm* (SN), TPB incorporates third key belief, *perceived behavioral control* (PBC), to explain a person's behavioral intention. TPB is considered a classic model in predicting behavior (Ajzen, 1991). Shortly, the idea behind the TPB is that behavioral achievement depends jointly on motivation (intention) and ability (behavioral control).

Perceived behavioral control (PBC) refers firstly to the extent of confidence that a person has in his/her ability to perform a certain behavior, which is grounded in one's self-efficacy (internal factor) and secondly to resource constraints that are required to perform a behavior (external factor) (Ajzen, 1991). Resource constraints are facilitating conditions available to an individual, such as money, time or technology. In the context of e-commerce, the internal factor can be the ability to use the internet and online stores and the external factor a computer with internet connection or today any other device that can be connected to the internet.

However, TRA and TPB are general models, which mean that those do not specify the beliefs that are operative for a particular behavior (Davis et al., 1989). Researchers using these models should first identify the beliefs that are salient for subjects regarding the behavior under investigation. Five to nine salient belief should be elicited using free response interviews with representative members of the subject population. Secondly, in TRA and TPB behavior is determined by behavioral intentions, which limits the predictability of the model to situations in which intention and behavior are highly correlated (Yousafzai et al., 2010).

4.1.2 Technology acceptance model

Technology acceptance model (TAM) is based on the framework of TRA and it is specifically tailored for modeling user acceptance of, or intention to use new information systems (Davis et al., 1989). With its extensions it is the most widely used model for

examining information technology adoption. According to Davis et al. (1989) a key purpose of TAM is to provide basis for tracing the impact of external factors on internal beliefs, attitudes and intentions.

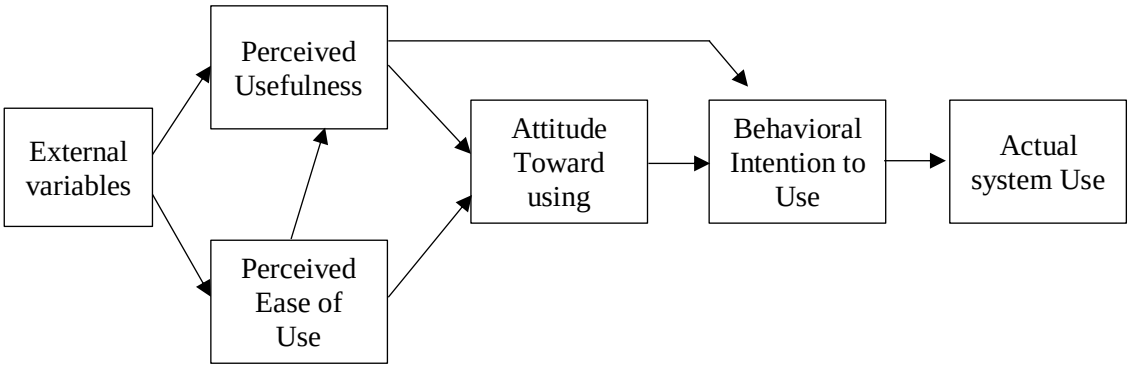

FIGURE 6: Technology Acceptance Model (TAM) (Davis et al., 1989)

According to TAM consumer's acceptance of a technology is determined by his/her voluntary intention to use that technology (Davis et al., 1989; Kotler et al., 2009; Yousafzai et al., 2010). Intention is determined by the consumer's attitude toward the use of that technology and his/her perception concerning its usefulness. Two important belief constructs behind the attitude are *perceived usefulness* and *perceived ease of use* (FIGURE 6). Perceived usefulness is defined as the prospective user's subjective probability that using a specific application system will increase his/her job performance within an organizational context. Later it has also been used for any common task in non-organizational settings, like internet shopping (Yousafzai et al., 2010). Perceived ease of use refers to the degree to which the prospective user expects the target system to be free of effort. In the online shopping context perceived usefulness can be conceptualized as the degree to which online shopping will provide the consumer with relative advantages in comparison to offline shopping and perceived ease of use as ease of the use of the internet for shopping purposes (Kotler et al., 2009). Actual system use refers to either the acceptance or rejection of an application use.

Both perceived usefulness and perceived ease of use are determined by external variables and perceived ease of use has also a direct influence on perceived usefulness (Davis et al., 1989). External variables can be system design characteristics, user training, user

participation in design and the nature of the implementation process. Later, the attitudinal construct was removed from the model, because perceived usefulness and ease of use both appeared to have direct influence on behavioral intention. Perceived usefulness has found to be the major determinant of behavioral intention and perceived ease of use has a smaller effect that subsides over time (Davis et al., 1989; Yousafzai et al., 2010). This means that if the consumer perceives the technology very useful, it does not matter if it is bit difficult to use. However, it does not work the other way. Regardless consumer perceives technology easy to use, he/she will not use it if he/she do not find it useful. While TRA and TPB, use situation-specific beliefs, TAM hypothesizes that perceived usefulness and perceived ease of use are always the primary determinants of technology use decisions (Yousafzai et al., 2010).

TAM has been adapted and extended in several studies while it has been stated that studies based and focusing on external variables in the original model has been only limited. One of the important extensions is TAM2 model that extended TAM by including subjective norm as an additional predictor of intention in the case of mandatory settings (Venkatesh and Davis, 2000).Venkatesh and Davis (2000) proposed that additional variables as antecedents to perceived usefulness could better explain the reasons for which a person would perceive a given system useful. Additional variables to perceived usefulness were subjective norm, image, job relevance, output quality and result demonstrability. A moderating variable voluntariness, that is the extent to which use of an innovation is perceived to enhance one's status in one's social system, was also added.

TAM has been used in a wide range of systems and technologies within varying organizational and cultural contexts, it has a strong theoretical base and well researched and validated inventory of psychometric measurement scales and it has strong empirical support for its overall explanatory power (Yousafzai et al., 2010). In the context of internet banking, Yousafzai et al., (2010) found out that TAM was superior to TRA and TPB in predicting actual consumer behavior. There has also been criticism for the TAM model. According to Chuttur (2009) criticism fall in three categories: the methodology used for testing the TAM model, the variables and relationships that exist within the TAM model and the core theoretical foundation underlying the TAM model.

4.1.3 Unified Theory of Acceptance and Use of Technology model

Venkatesh et al., (2003) further extended TAM and TAM 2 models to the Unified Theory of Acceptance and Use of Technology (UTAUT) model. UTAUT model is based on eight previously established models (TRA, TPB, TAM, Motivational model (MM), Combined TAM and TPB (C-TAM-TPB), Model of PC Utilization (MPCU) and Innovation diffusion theory (IDT).

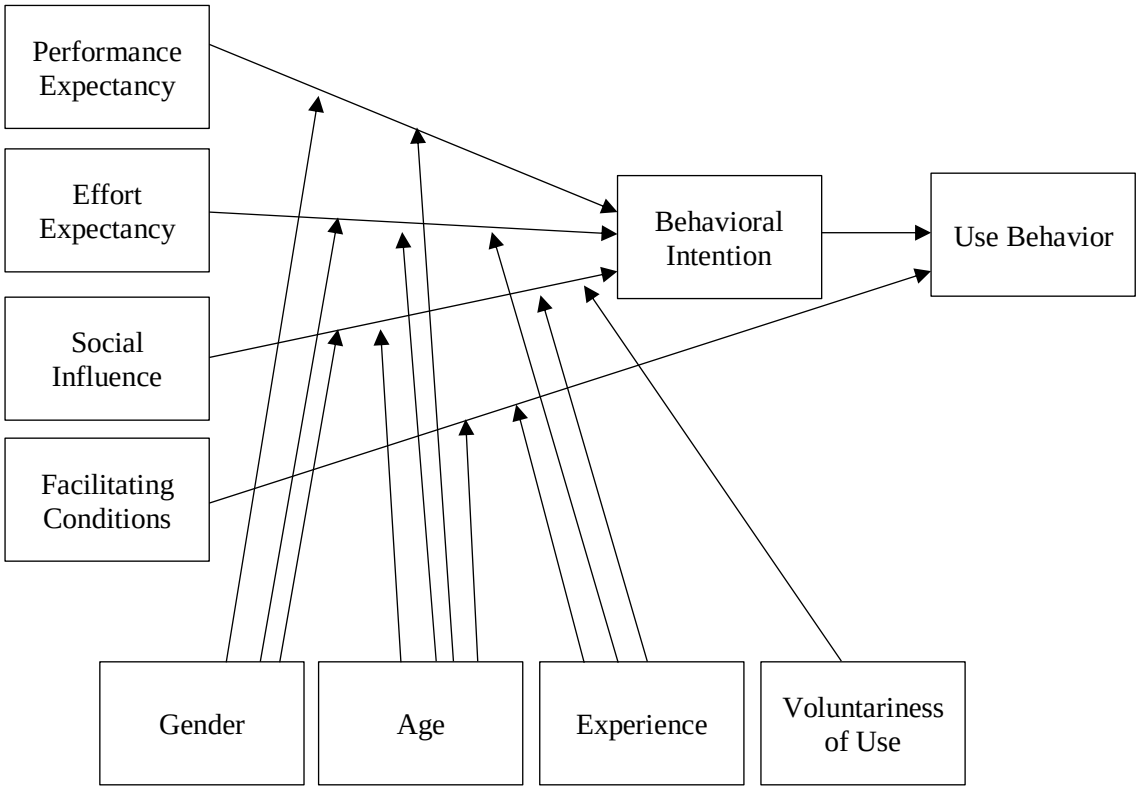

FIGURE 7: The Unified Theory Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003)

According to UTAUT model there are four constructs that play a significant role as direct determinants of user acceptance and usage behavior; *performance expectancy*, *effort expectancy*, *social influence* and *facilitating conditions* (FIGURE 7) (Venkatesh et al., 2003). Effort expectancy refers to "the degree of ease associated with the use of the system" and the construct of perceived ease of use in TAM model capture the concept of effort expectancy. Performance expectancy is defined as "the degree to which an

individual believes that using the system will help him/her to attain gains in job performance". Perceived usefulness in TAM model pertain to performance expectancy. Social influence is defined as "the degree to which an individual perceives that important others believe he or she should use the new system" and this is known as the subjective norm in TRA, TPB and TAM2 models. Finally, facilitating conditions are defined as "the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system". This refers to the construct of perceived behavioral control in TPB.

According to UTAUT model the performance expectancy, social influence and effort expectancy are direct determinants of intention to use and facilitating conditions and intention are direct determinants of the actual usage behavior (Venkatesh et al., 2003). Moderators in these relationships are gender, age, experience and voluntariness of use. These either weaken or reinforce the effect of the determinants.

Yin et al. (2016) adapted UTAUT model to the context of online pharmacies by dropping out the construct of facilitating conditions and adding two constructs, *perceived trust* and *perceived risk* in order to fit it to the case of online pharmacies. Immonen et al. (2014) have also studied the customer expectations towards brick-and-mortar pharmacies and online pharmacy services based on TAM and UTAUT model. This is one of the sparse studies made in Finland about consumer acceptance of online pharmacies.

4.2 Additional constructs

4.2.1 Consumer perceived trust

Consumer perceived trust is found to be one of the most important factors while studying e-commerce (Büttner and Göritz 2008; Darley et al., 2010; Yin et al., 2016). Consumer perceived trust is defined as the trust in the platform, the retailers, the products, the payment system and the logistics of delivery. While shopping online, customer cannot feel, touch or try the products, the color or size of the product can be hard to estimate while computer or mobile screen can distort the color, or the picture can be of a such quality that one cannot picture the product truthfully. Customer cannot know beforehand

if the ordered item will turn out to be the one they wanted either, so she/he has to rely on the promises the online retailer gives. Trust is also needed with customer's personal information not passing to other parties or credit card information staying safe from hackers. So, there can be quite many situations where something could go wrong while shopping online and this is why online retailers should work hard to win customers trust over.

In the pharmaceutical sector trust is highly important while consumers' health or even their life are at stake and buying drugs from online pharmacy also requires customer to give sensitive information about her/his health status to the provider, especially with prescription medicines. Yin et al. (2016) revealed that perceived trust mainly comes from three dimensions: guarantee of pharmaceutical e-commerce market, guarantee of online pharmacies and guarantee of medicine bought online. If the retailer loses customer trust, the customer most probably becomes unsatisfied and resistant to the service and will finally stop using the service at all.

As discussed earlier, in Finland every legally operating online pharmacy service can be identified by the pan-European logo. This can be thought as a third-party recognition or legal framework that help customers to think site as secure and more reliable to them (Kumar and Dange, 2012). In addition, online pharmacy service has to be linked to a brick-and-mortar pharmacy, so customer can for example actually visit the pharmacy before the first online purchase if its nearby and customer wants to evaluate its trustworthiness more easily than with mere online store.

Risk taking can be seen as a consequence of trust (Büttner and Göritz 2008). This can easily be demonstrated for example by customer purchasing drug from the online pharmacy. While customer makes the purchase, he/she is accepting the possibility of adverse consequences of the purchase, for example not getting the right product. Researchers have also found trust to foster the intention to buy, intention to share personal information, satisfaction with a provider, the intention to follow advice and self-reported taking of advice. Trust has also been seen to enhance customer loyalty to the retailer.

4.2.2 Consumer-perceived risk

Consumer perceived risk and lack of trust are closely related to the medicinal information on the internet and the e-commerce of medicines. According to Büttner and Göritz (2008) perceived risk refers to consumer's subjective assessment of possible negative consequences that a behavior might produce, and two different types need to be distinguished. Those are the risk associated with a particular interaction partner and the risk perceived with that kind of transaction in general. Perceived risk can further be divided into six subcategories. These are performance-related, financial, psychological, social, time-related and physical risk. According to Wiedmann et al. (2010) performance-related risk and financial risk are major obstacles to purchasing online.

In the pharmaceutical sector, perceived risk is associated with the difficulty to guarantee the quality of the medicine bought online, defects in the dosage and clarity of the use of the medicine that can cause significant risk for the consumer (Buttner et al., 2006). Some platforms used by online pharmacies are incomplete and they may lack easily obtainable guidance on medicines, for example how to use and dosage the medicine. People may perceive high risk on buying medicines online, but if some particular shop makes everything that customer can trust them, they probably will use their service regardless of the risk they perceive in general. All in all, perceived risk has a strong impact on consumers decision to revise, postpone or even avoid purchase decision (Kotler et al., 2009).

4.3 Previous studies

There can be found a few Finnish studies that explore customer adoption of online pharmacy services. Suvi Hannula (2012) studied factors that affect consumer adoption of online pharmacies in her bachelor's Thesis and used TAM, TRA and TBP as a theoretical background of her study. However, this study was made regarding prescription medicines. Immonen et al. (2014) studied the customer expectations towards brick-and-mortar pharmacies and online pharmacy services based on TAM and UTAUT model. Master's Thesis of Suvi Hannula (2015) explored adoption and usability of online pharmacies for purchasing prescription medicines. Hannula's research based on TAM

and its extensions adding satisfaction and disconfirmation constructs from expectation-confirmation model.

International studies concerning adoption of online pharmacy services can be found bit more, although it has to be noted, that due to national regulations they cannot be applied as they are in the Finnish situation. Yin et al. (2016) adapted UTAUT model to the context of online pharmacies by dropping out the construct of facilitating conditions and adding two constructs, *perceived trust* and *perceived risk* in order to fit it to the case of online pharmacies. Holtgräfe and Zentes (2012) studied the effect of drug information seeking behavior on the use of purchase channels based on adaptation of TAM, Comprehensive model of information seeking (CMIS) and Model of external consumer information search and adding construct of "Internet experience". Wiedmann et al. (2010) base their study on a perception-based model of online pharmacy shopping attitudes and behavior. This combines TPB and perceived value and risk perspectives.

II EMPIRICAL STUDY

5. STUDY OBJECTIVES

5.1 Background of the study

The objective of this study is to explore the acceptance and use of online pharmacies for the purchase of OTC medicines. More specifically, the aim is to find out, what are the reasons behind the willingness to purchase/not purchase OTC medicines online. Furthermore, the aim is to investigate online purchase behavior for OTC medicines and to find out the insights required to develop a more seamless online customer journey. This study is made from the customer point of view.

5.2 Research Questions

1. What are the drivers and barriers for the online purchase of OTC medicines?
2. What are the factors that could facilitate overcoming the barriers to purchase OTC medicines online?

3. What are the insights required to develop the online customer journey to be more seamless?

5.3 Theoretical framework

Online pharmacy shopping can be seen as an adoption of technological innovation. Theory of reasoned action (TRA), theory of planned behavior (TPB) and technology acceptance model (TAM) with its extension as well as Unified Theory of Acceptance and Use of Technology model (UTAUT) with its extension are models that have widely been used to predict behavior and adoption of innovations in many fields, also in the pharmaceutical sector.

Theoretical framework for this study is based on technology acceptance models. TAM is adapted for the purpose of this study by adding constructs of perceived risk and preferred use of the Internet as an OTC drug information source. Theoretical framework for this study is presented in FIGURE 8.

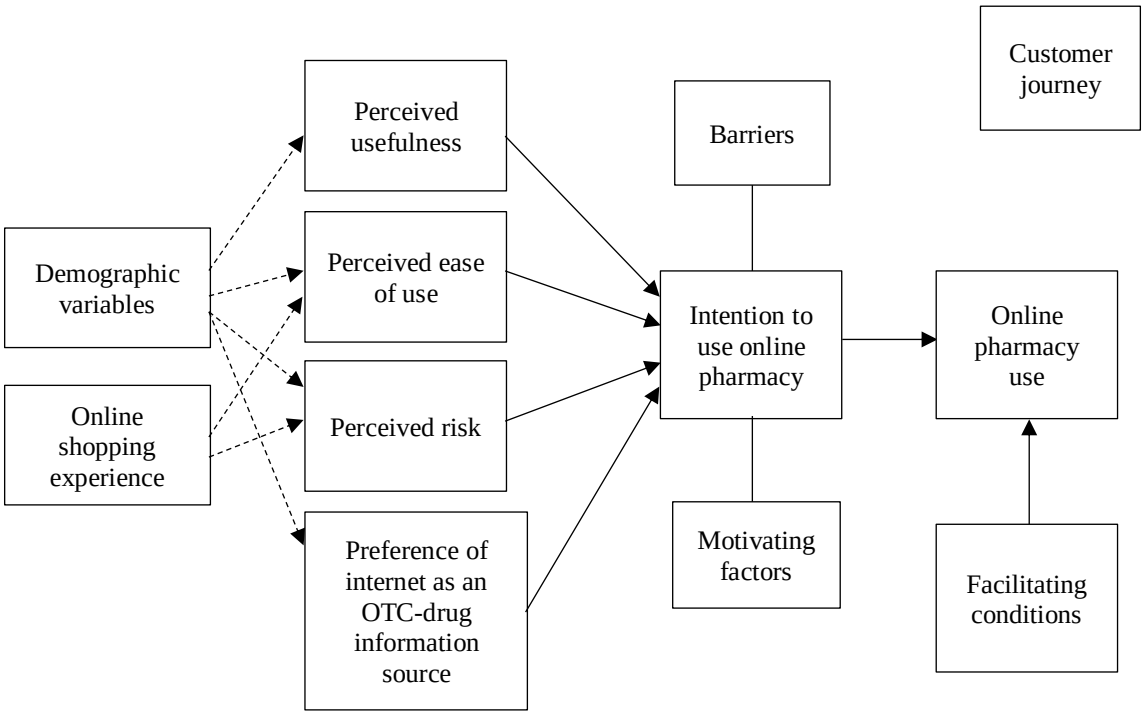

FIGURE 8 Theoretical framework regarding the acceptance and use of online pharmacies

6. MATERIALS AND METHODS

6.1 Research methodology

This study was conducted as a combination of a cross-sectional survey and interview. Interview was conducted as a focus group discussion and one-on-one interview. Combining different research methods in a same study is called methodological triangulation (Hämeen-Anttila and Katajavuori, 2008). With the help of triangulation more diverse information can be obtained and the research questions can be covered from different point of views. By combining interview with the survey, more in depth knowledge can be obtained in addition to more generalizable data that the survey offers. The survey was conducted first, and the interview followed after that.

6.1.1 Survey

Survey is a quantitative method that is generally used research method in social and health sciences (Turunen, 2008). According to Turunen (2009) it is often also the only way to collect information from large population, that one cannot get from registries or databases. Data can be collected using different methods, for example by mail or e-mail, at the internet using digital form, or with a structured face-to-face or phone-interview. By using survey, it is possible to get data that can be generalized to concern larger population by using statistical deduction.

6.1.2 Interview

Interview is the most frequently used method in qualitative research and it is used when the aim is to find out people's perspectives, thoughts, experiences and perceptions of the area under research (Hämeen-Anttila and Katajavuori, 2008). In addition, interviews are used in combination with surveys to get deeper knowledge. Interview is carefully planned in advance and guided by the interviewer. In this method the interviewer is able to ask the respondent to further define his/her answers or to give one's reasons and motives. Interview offers also the possibility to control the order of the questions, which is not possible when using questionnaires. There are different forms of interviews where the

role of the interviewer and the degree of structure of the questions varies. Interview can be organized as one-to-one discussion, such as a theme interview or an open interview, or it can be a group discussion such as a focus group interview.

In focus group discussion interviewer is interviewing multiple interviewees at a time and focusing questions to a single group member from time to time (Hämeen-Anttila and Katajavuori, 2008). The objective of focus group discussion is to create as much discussion between the participants as possible. The aim is, that the interviewee can listen to the conversation as long as possible without intervening in it and asking defining questions or taking the conversation back to the important themes of the study. The interaction between the group members is important, and it can raise perspectives that could not be achieved in individual interview. The advantage of the group interview is that multiple opinions at a time can be obtained and compared to single interviews it is faster and cheaper to organize. In addition, in focus group discussion people are usually more open to bring out critical comments as well.

The interviewees can be chosen by using convenience, snowball, purposive, representative or theoretical sampling (Hämeen-Anttila and Katajavuori, 2008). In convenience sampling easily reached people interested about the research topic are asked to participate in the interviews. Snowball sampling means that people already participated in the interview are asked to name someone else possibly interested to take part also. In purposive sampling the characteristics required from the participants are defined beforehand and only those who meet the demands are included. In representative sampling the aim is to generalize the results at least in some amount. This requires representative sample of different participants, for example men and women, people with different ages and education and so on. In theoretical sampling interviewees are chosen by using principles that are derived from used theory, former studies or own research results.

In most studies there are at least three different focus group interviews, but the adequate amount of data is very hard to estimate beforehand (Mäntyranta and Kaila, 2008). According to Hämeen-Anttila and Katajavuori (2008) the number of interviews is

adequate when new interviews do not bring on any new information or perspectives concerning the research questions. This point is called saturation point. Number of the participants per one discussion group varies between 4-10. Hämeen-Anttila and Katajavuori (2008) recommend to use groups of 4-6 people based on their experience. The aim in the selection of participants is not statistical representativeness, but to get together a group of interviewees that can bring different points of views into the research subject (Mäntyranta and Kaila, 2008).

6.2 Data collection

6.2.1 Survey

A Finnish semi-structured questionnaire with a few open questions was developed for this study by the researcher in close co-operation with the thesis supervisors (Appendix 1). Questions were carefully selected and validated questions used in relevant prior studies was utilized when possible (TABLE 2). While no validated questions was available, relevant theories were utilized when possible. At the beginning of the survey there was a short introduction text to explain that the survey was part of Master's thesis work at the University of Helsinki. The introduction also shortly explained the purpose of the research, ensured the respondents that the collected data would be confidentially handled and gave a time estimate to completing the questionnaire. There was also explained that respondents have the possibility to participate in a prize draw and to win a gift card of 50 euros, if they fill out their contact information at the end of the questionnaire. The same text but bit shorter was also attached with the link to the questionnaire.

TABLE 2: Validated questions used in relevant prior studies utilized in the questionnaire

Construct	Items	Item Sources	Theory
Online pharmacy use	Have you bought medicines from online pharmacies? (Never, and would not buy; never, but could consider buying; once or twice, a few times a year, monthly, weekly)	Moe (2003), Roblek et al, 2018). Wiedmann et al. 2010.	TAM
Purchase intention (PI)	How likely it is for you to by medicines from online pharmacies in the future? (1= very impropable, 5=very probable)	Venkatesh et al. 2003, Yin et al.	UTAUT
	How likely are you to recommend online medcine purchase to some special person of yours? (1= very impropable, 5=very probable)	Adapted Wiedmann et al. 2010, Venkatesh et al. 2003, Yin et al.	
Knowledge	Did you know that medicines can be bought also from online pharmacies? (Yes/No)	Wiedmann et al.2010	
Preference of internet as an OTC drug information source	What is your most preferred source of OTC-drug information before purchase? (Doctor, Pharmacy staff, Internet, Family/friend/Other)	Holtgäfe and Zentes (2012)	TAM + CMIS (Comprehensive model of information seeking)
Perceived usefulness of the internet as an OTC drug information source	With the help of the internet I can get useful OTC drug information (1= completely disagree, 5=completely agree, 6= no experience)	Holtgäfe and Zentes (2012)	
Perceived ability to search online	I'm able to find information about non-prescription drugs on the internet (1= completely disagree, 5=completely agree, 6= no experience)	Holtgäfe and Zentes (2012)	
	I'm familiar with searching for non-prescription drug information on the internet (1= completely disagree, 5=completely agree, 6= no experience)	Holtgäfe and Zentes (2012)	
	It's difficult for me to find non-prescription drug information on the internet (1= completely disagree, 5=completely agree, 6= no experience)	Holtgäfe and Zentes (2012)	
Perceived credibility of online information	I'm able to sort out, which OTC drug information found from the internet is realible (1= completely disagree, 5=completely agree, 6= no experience)		
Subjective knowledge	I feel that I'm able to find sufficient amount of OTC drug information from the internet (1= completely disagree, 5=completely agree, 6= no experience)		
Perceived Usefulness	By buying online I can decrease the time that shopping takes (1= completely disagree, completely agree)	Adapted Roblek et al 2018.//Wiedmann et al. 2010	UTAUT
	I appreciate that I don't have to discuss face to face with a pharmacist about my situation	Wiedmann et al.2010	
	I appreciate that I can do shopping 24/7 from any place I want	Adapted Roblek et al 2018./wiedmann et al. 2010	
	Buying online is more effortless than buying from brick-and-mortar pharmacy		
	It is faster and easier to compare products and prices online than in brick-and-mortar pharmacies		
	I can get more information of drugs online than in brick-and-mortar pharmacies	Lostakova et al. 2012, Gurau 2005, Bach and Kim 2012, Roblek et al. 2018	
	I can buy products I cannot find elsewhere		
	I get trustwothy customer service by using online pharmacy		
Perceived risk (PR)	I am conccerned that my monetary details does not remain safe		
	I am concerned that my personal information will be handled in unwanted manner		

	I am concerned that medicines bought from the online pharmacy are either counterfeit or of bad quality	Koufaris et al. 2004, Yin et al. 2016, Wiedmann et al. 2010	
	I worry about whether the right products would be delivered	Wiedmann et al.2010	
	I am concerned that medicine ordered at an online pharmacy could probably be harmful to me	Koufaris et al. 2004, Yin et al. 2016, Wiedmann et al. 2010	
	I am affraid that I can't get enough information on the correct use of the medicine	Wiedmann et al.2010	
	I am worried that compability of the medicines I use cannot be ensured		
Perceived ease of use	How much is following points affecting your willingness to shop in online pharmacies? (1= not at all, 5= very much)		UTAUT /TAM
	Ordering is easy		
	The online pharmacy web site is easy to use		

Different sections were created to cover the study objectives: demographics, internet use and experience with online shopping in general and acquisition of OTC medicines, acquisition of medicinal information, customer-perceived usefulness and risks concerning online pharmacies and visiting online pharmacies. In addition, there was separate sections for those who already had bought medicines online and those who had not, for example motivators and barriers for buying medicine online was asked. Demographic variables used in this study were gender, age, place of residence, income, education, phase of life and occupation. At the end there was a question whether the respondent is willing to participate in an interview later on. Questionnaire was created by using the E-lomake- service provided by the University of Helsinki.

Most of the questions were measured by using 5-point Likert scale. Likert scale is used especially in questionnaires measuring opinions and attitudes (Turunen, 2009). The scale can be either 3, 5 or 7 points and the respondent chooses option that represents best his/her opinion. The extreme ends of the scale can be for example 1= totally disagree, 5= totally agree while measuring opinions. At the middle there is option “do not agree neither agree”. There was also an option “I cannot tell”/”No experience” if the question was based on impression of online pharmacies. In addition, there was multiple choice questions where the respondent could pick one or more options from a selection offered, or the option “other” and a possibility to tell what that is.

The questionnaire was piloted before starting the actual survey. The form was filled in and checked for spelling and clearance by six respondents. In addition, they measured the time it took to fill in the form. They were also asked to evaluate functionality of the questions with respect to content. The questionnaire was slightly modified based on their comments and hence the data obtained by the pilot survey was not included at the analysis of the final data.

Survey was aimed at consumers between 18-74 years living at the Greater Helsinki area (Espoo, Helsinki, Kauniainen, Vantaa). The survey was conducted as an online-survey which was open from 16.1.-10.2.2019. Participants were chosen by convenience sampling and they were drawn in by distributing the link to the questionnaire via social media, mainly by Facebook, and in co-operation with a few pharmacies in the Greater Helsinki area. A prize draw with the possibility to win a gift card of 50 euros was used as an incentive to participate to the study. According to Turunen (2009) a form that can be filled in the internet can be used while studying some precisely defined research crowd that is easily reached via internet. Today almost everyone is using the internet daily, so by distributing the survey actively in different channels of the social media many people from the target group can be reached. It can be thought that people not using the internet are currently not potential users for online pharmacies, so the internet was suitable media for collecting the data.

The survey was completed by 297 respondents. However, 35 cases were omitted from the analysis. Two respondents did not express were they lived, and 24 respondents were living outside the target area. In addition, one respondent was over 74 years old, one did not express her/his age and one case was missing so much data that it could not be included. Finally, 6 respondents turned out to be pharmacists and were omitted due that. So, the final number of respondents was 262.

6.2.2 Interview

Semi-structured framework for the interview was carefully designed for this study. The framework was developed by the researcher together with the Master's thesis supervisors. Framework based on theory of the customer journey and survey questions. The subject

of the study and main constructs of the interview was shortly presented at the beginning. At first there was a short introduction question to warm-up the participants. In addition, there was six different main themes that concerned different phases of the consumer decision journey while purchasing OTC medicines online. Those where the channels linked to the information search, the type of information acquired before buying OTC medicines, the view of the google search page, making the purchase decision, landing to the online pharmacy webpage and finally why to choose brick-and-mortar or online pharmacy. Concrete examples, for example different variations of ways to present the online pharmacy listing at the product or company web page after clicking on ad or an example of what information is visible at the google search page was presented with Microsoft Power Point presentation. Defining, further questions were asked when necessary.

The framework for the interview was piloted in April 2019. The interviewees (n=5) were recruited by interviewers own personal contacts and the pilot-interview was held as focus group discussion. The framework for the interview was found to be successful and only minor changes were made. Therefore, data obtained by the pilot interview was included for the final analysis. Participants were asked to fill in a background information form, which consisted of questions about age, gender, income, education, occupation and phase of life. Discussion was also videotaped by the permission of the participants.

Interviews were aimed at the same target group as the survey. Interviewees were chosen by using convenience sampling and they were roped in by using social media. Participants of the survey could also express their interest for the interview at the end of the survey. The only exclusion criteria in addition to age and location was not to be pharmacy professional. The original idea was to hold two focus group discussions, but because it appeared difficult to get enough participants present at the same time, three one-to-one interviews was held in addition to one focus group discussion (pilot). Discussions were held at May 2019. Interviews were videotaped with the permission of the participants. Participants were informed of the topic of the study and explained that participation was voluntary. In addition, they were asked to fill in background information form described earlier. Discussions lasted from 30 minutes to around one hour. As a reward of

participating in the discussion interviewees were given a little gift afterward, which was a movie ticket.

6.3 Data analysis

The obtained data was analyzed by combining quantitative and qualitative analysis. The data acquired by the questionnaire was processed and analyzed using version 25.0 of the IBM Statistical Program for Social Sciences (SPSS) and through synthesis of the findings obtained. The frequencies, relational percentage share and mode was calculated to describe the socio-demographic and background information of the respondents as well as motivators and barriers for the online pharmacy use. In addition, median was calculated when applicable. A sum variable was formed for options measuring the consumer-perceived ease of use, usefulness and risk and the reliability of the answers on those variables was calculated by determining Cronbach's alpha. Crosstabulation (chi-squared test) was used to test the relationship between different constructs.. As a limit value of statistical significance in all analyzes was *p*-value of 0.05. Data obtained with open questions was analyzed by using deductive content analysis. Data was first reduced and then categorized to classes and further condensed in subclasses.

Recordings of the focus group discussions were transcribed verbatim and analyzed using conventional deductive content analysis. First, meaningful units of the transcripts were manually coded and then classified in themes and condensed during the analysis.

For the processing of the data some of the background variables and answer options in the questionnaire were re-classified and some classes were combined. Changes with reasonings are presented in TABLE 3.

6.4 Ethics

There was no need for ethical approval for this study since participation for both survey and interviews was voluntary. Personal data of the participants was not used in the study and data was dealt with in confidence. Participants were informed of the study in writing and in the interviews also verbally at the beginning of the discussion. Participants of the

interview gave a written consent to participate to this study and completion of the questionnaire was a sign of voluntariness in the survey.

TABLE 3. Re-classification of original variables and response options

VARIABLE	NEW CLASS	ORIGINAL VARIABLE / COMBINED CLASSES	JUSTIFICATION
Age	<25	Year of birth	Adaptation of year of birth to age and classification of age. Same kind of classification is used by OFS.
	25-34		
	35-44		
	45-54		
	>54		
Income	> 50 000€	50 001€ - 85 000€ + 85 001€ -100 000€ + >100 000€	Distillation of classes; small frequencies in classes 85 001€ - 100 000€ (5) and >100 000 (2)
Distance	<1 km	Distance to the nearest pharmacy	Classification of distance.
	1-1.9 km		
	2-1.9 km		
	3-3.9 km		
	>3.9 km		

7. RESULTS

7.1 Demographic and background information

7.1.1 Survey

Most of the respondents of the survey were female (89.7%, n=235). Male were 9.5% (n=25) and 0,8% (n=2) reported being "other". The age of the respondents varied between 19-74 years and most respondents belonged to groups of 25-34 year old (35,6%, n=93) and 35-44 year old (22,2%, n=58). The mean age of the respondents was 37 (SD 13.0) years and median age 34 years. Respondents lived quite equally in Espoo (37.4%), Helsinki (38,2%) or Vantaa (23. 7%), but only 0.8% in Kauniainen. Distance to the nearest pharmacy varied between 0-15 kilometers, the mean distance being 1.9 km and median 1.2 km.

Most of the respondents were either living alone (30.1%), with spouse (30.5%) or in a household with kids (34.0%). Only 2.3% lived with parents. Almost 60% of the respondents had an academical degree or degree from the university of applied sciences and median income was 20000€ - 35000€. Nearly 80% (75,6%, n=198) of the respondents used internet over two hours daily on their own time. Description of the sample's characteristics is presented in TABLE 4.

TABLE 4. Description of the sample's characteristics (n=262)

Variable	%	n
Gender (GEN)		
Female	89,7	235
Male	9,5	25
Other	0,8	2
Age, years (AGE)		
<25	16,1	42
25-34	35,6	93
35-44	22,2	58
45-54	12,6	33
> 55	13,4	35
Location (LOC)		
Espoo	37,4	98
Helsinki	38,2	100
Kauniainen	0,8	2
Vantaa	23,7	62
Distance, km (DIST)		
<1	26,2	68
1-1,9	33,8	88
2-2,9	15,4	40
3-3,9	9,2	24
>3,9	15,4	40
Situation in life (SIL)		
Living with parents	2,3	6
Living alone	30,1	78
Living with spouse	30,5	79
Living in a household with kids	34,0	88
Other	3,1	8
Income, €/year (INC)		
< 20 000	26,2	64
20 000-35 000	31,6	77
35 001-50 000	26,6	65
> 50 000	15,6	38

Variable	%	n
Education (EDUC)		
Comprehensive school/ elementary school/middle school	3,1	8
Vocational basic degree/ school	15,4	40
Secondary school graduate	14,2	37
College-level vocational degree	8,1	21
Upper college-level degree/university of applied sciences/University	56,2	146
Licentiate/doctoral degree/docent	2,7	7
Other	0,4	1
Occupation (OCC)		
Leading position	3,1	8
Upper clerical worker/specialist/ Teacher	20,8	54
Lower clerical worker	8,9	23
Employee	27,8	72
Entrepreneur	2,3	6
Pensioner	5,8	15
Student/school boy/girl	23,2	60
Housewife/househusband	2,7	7
Unemployed	3,1	8
Other	2,3	6
Internet Use		
> 2 hours a day	75,6	198
ca. 1 hour a day	23,7	62
1-2 hours a week	0,8	2

"Every few months" was the most common frequency to buy OTC medicines (39.7%, n=104) and female were buying OTC medicines bit more often than male (FIGURE 9).

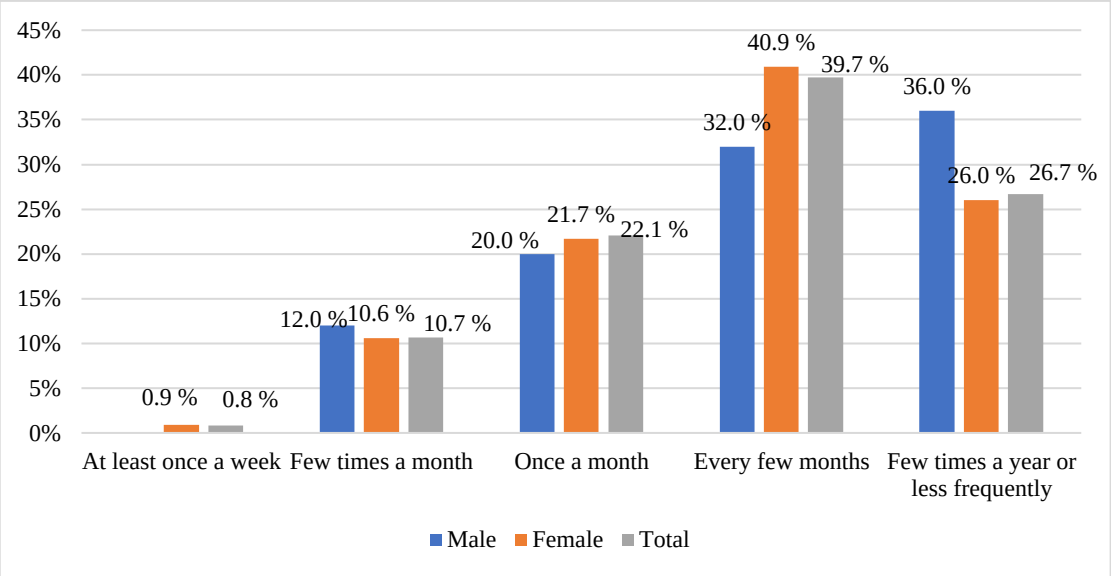

FIGURE 9. Purchase frequency of OTC drugs; response distribution to question: "How often you buy over the counter medicines?"

7.1.2 Interviews

There were eight participants in the interviews, five took part in the focus group discussion and three interviews were held as one-to-one theme interviews. All participants were female and their age varied between 36-45 years the mean age being 40 (SD 3.65). Three of the interviewees had vocational basic degree or degree from vocational school and the rest five had university of applied sciences, upper college level or university degree. All interviewees with the exception of one lived in Espoo. Two participants lived with spouse and the others in a household with kids. Income varied between 20 000 – 85 000 euros and two could or did not want to tell her income. None of the participants had bought OTC medicines online, but two of them had bought some vitamins or cosmetic creams from online pharmacies.

7.2 Online shopping experience and use of online pharmacies

Nearly every respondent of the survey had used internet for purchasing something, regardless of the product or service (99.2%, n=260) and 46.9% (n=123) reported buying something from the internet monthly. None of the respondents reported having never

bought something online and that would never buy, instead those few who reported not purchased yet said they could consider buying (0.8%, n=2).

Of the total sample (n=262), 89.6% (n=232) was aware that medicines can be bought from online pharmacies and 16.5% (n=43) had already done at least one purchase. Of those, 60.5% (n=26) reported having purchased once or twice, 32.6% (n=14) buying few times a year and 7.0% (n=3) reported buying medicines online monthly. Of those who had not purchased medicines online (n=218), 93.1% (203) reported being able to consider buying medicines online, and 6.9% (n=15) said they would never buy medicines online. Neither age, gender, income or education had significant difference on buying medicines online. The amount of those who had used online pharmacies for the purchase of other products than medicines was a bit higher, 36.2% (n=93) and correspondingly 63.8% (n=164) had not. Online purchase of medicines, other pharmacy products and overall goods or services is summarized in FIGURE 10.

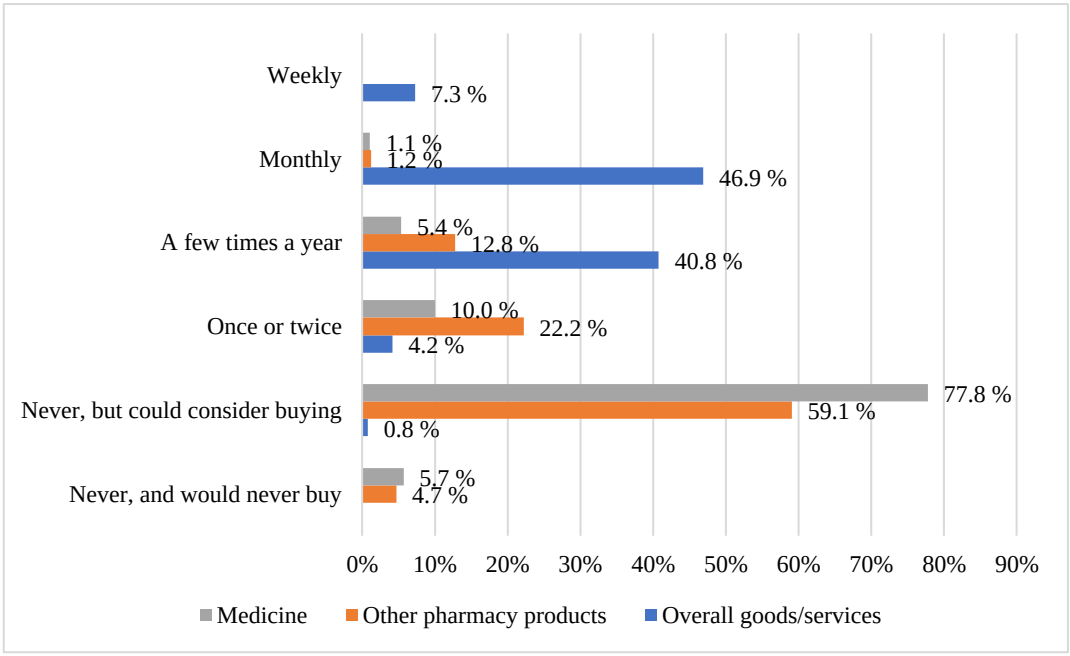

FIGURE 10: Online purchase frequency of medicines, other pharmacy products and overall goods or services; response distribution to question: *Have you bought medicines/other pharmacy products/goods or services online?*

Satisfaction with online pharmacies among buyers (n=43) was good or rather good in nearly every aspect. Only delivery and price of the delivery caused a little dissatisfaction, while 4.7% (n= 2) felt rather dissatisfied with the delivery and 7% (n=3) with the price of the delivery. Satisfaction with online pharmacies is described in FIGURE 11.

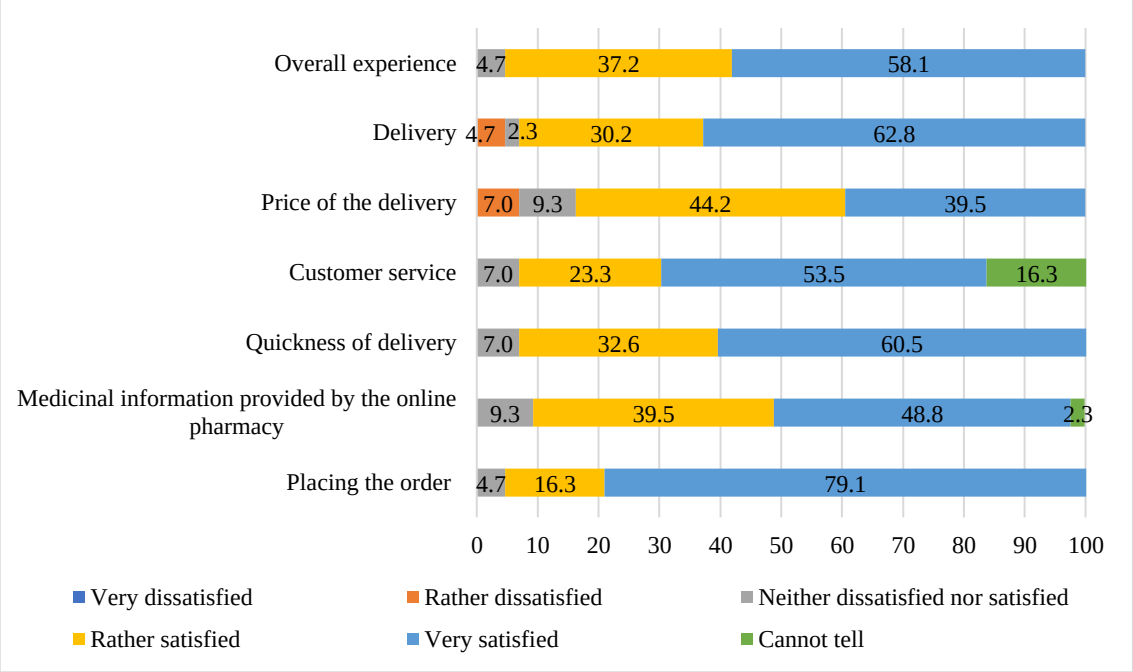

FIGURE 11: Satisfaction with the online pharmacies; response distribution of buyers (n=43) to question *"How satisfied you are with…".*

Future intention to use and recommend online pharmacies for the purchase of OTC medicines was also measured. Over 50% (54.8%, n=142) of the respondents reported being rather or very likely to purchase medicines online in the future and 39.7% (n=103) rather or very likely to recommend it for important others. Rather or very unlikely to use online pharmacies in the future was 28.2% (n=73) of the respondents and 30.9% (n=80) thought they would rather or very unlikely to recommend it to important others. Future intention to use and recommend online pharmacies for the purchase of OTC-drugs is presented in FIGURE 12.

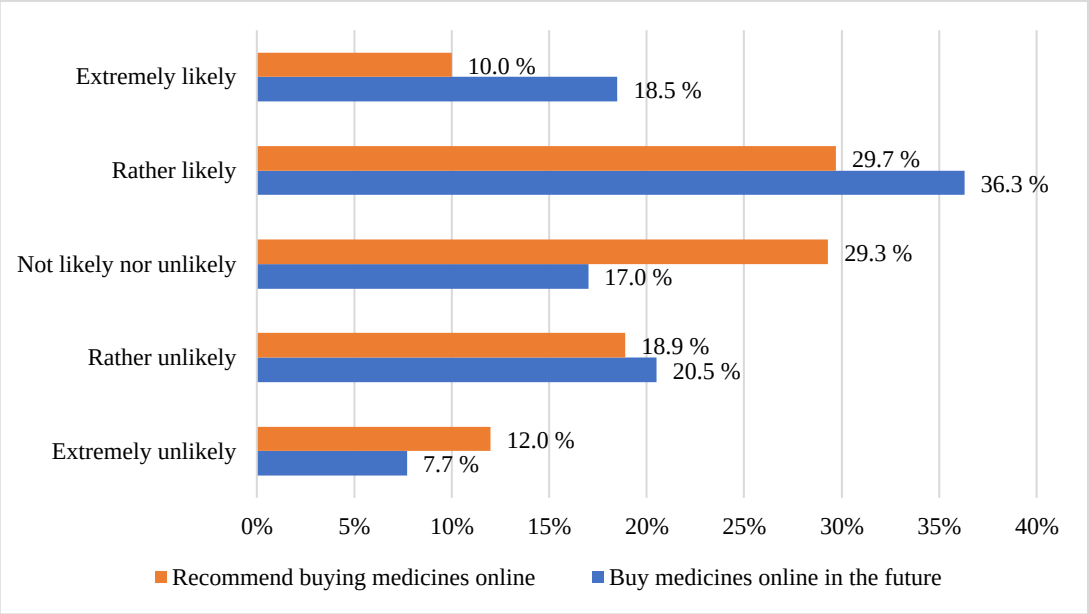

FIGURE 12. Future intention to use and recommend online pharmacies for the purchase of OTC medicines. Response distribution to questions: *"How likely it is for you to by medicines from online pharmacies in the future?"* and *"How likely are you to recommend online medicine purchase to some special person of yours?"*

7.3 Drivers for the use of online pharmacies

Reasons for the use of online pharmacy for purchasing medicines was explored with the survey. Drivers were asked from those who already had made at least one purchase. Most common drivers were the possibility to shop where and whenever (67.4%, n=29), convenience (55.8%, n=24)), time saving (41.9%, n=18) and unwillingness to use time for queuing (39.5%, n=17). Other reasons were wider product range (16.3%, n=7), larger amount of information (14%, n=6), privacy (14%, n=6), dissatisfaction with brick-and-mortar pharmacy (11.6%, n=5) and availability of the product (4.7%, n=1). About quarter of the buyers reported they had decided to purchase online beforehand (25.6%, n=11) and 14% (n=6) said they searched information from online pharmacy and decided to purchase straight away. Drivers for the use of online pharmacy are described in FIGURE 13.

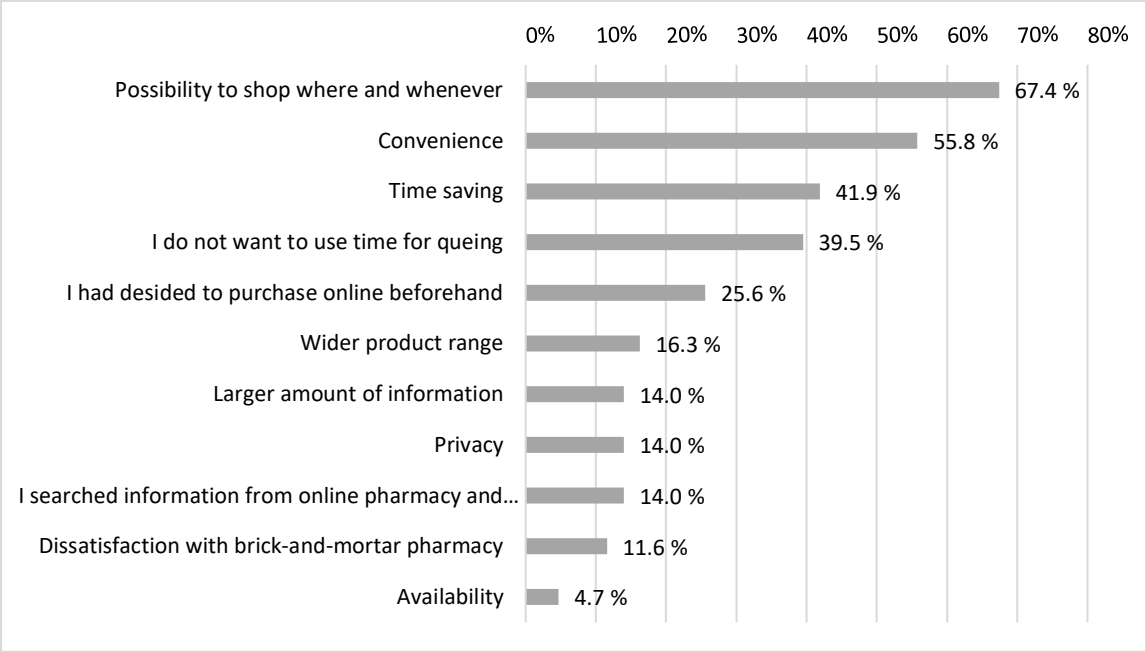

FIGURE 13. Reasons for the use of online pharmacy; response distribution of buyers (n=43) to question: *"What is/was the reason to purchase from online pharmacy instead of brick-and-mortar pharmacy?"* Respondent could pick more than one reason, so the sum is more than 100%.

Respondents had also the possibility to describe other reasons for the purchase on one's own words. Cheap prices were mentioned most often (n=4) and the possibility to get to know the product and compare it to other products (n=3). "*In an online setting I can familiarize myself with the product in peace and compare it to other products. In pharmacy the purchase decision is made more quickly and no comparison is made*". Other mentioned reasons were the ease of price comparison (n=2), desire to experiment (n=1), regular customership (n=1) and offers (n=1).

While asked about the importance of factors affecting the decision to purchase medicine online, nearly 60% (59.5%, n=25) considered product information in online pharmacy web site to have quite or very big effect. Nearly as many (53.5%, n=23) considered the use of search engines on information search quite or very important as well as opinion, recommendation or experience of important others (46.5%, n=20). Advertising, whether online or traditional, and internet forums were seen to have quite little or no effect at all by over half of the respondents (see FIGURE 14).

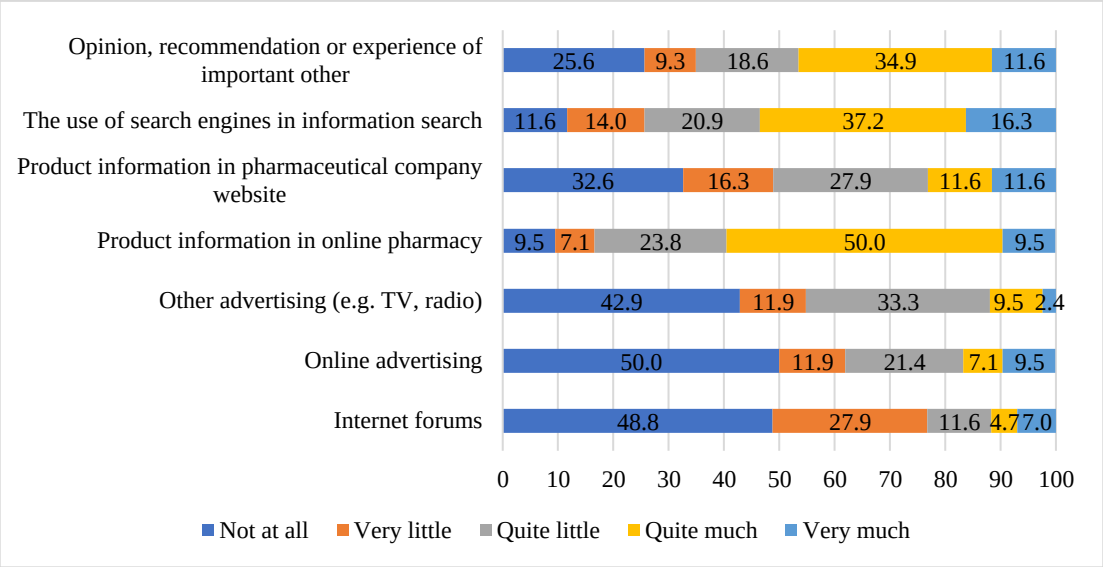

FIGURE 14. Factors affecting the decision to purchase online; response distribution of buyers (n=43) to question: "*How much are following factors affecting your decision to purchase medicine online?"*

7.4 Barriers for the use of online pharmacies

Barriers for the use of online pharmacies were asked from those who had not purchased medicines online (n=218). The most common reasons not to purchase OTC medicines online was that there is no added value to buy medicines online (80.3%, n=175), high price of the delivery (35.3%, n=77) and long delivery time (34.9%, n=76). Other reasons were lack of personal service (23.9%, n=52), no guarantee that the medicine is compatible with other medicines in use (14.7%, n=32) and unawareness of the possibility to buy medicines online (11.9%, n=26). Barriers for the use of online pharmacies for the purchase of medicines are described in FIGURE 15.

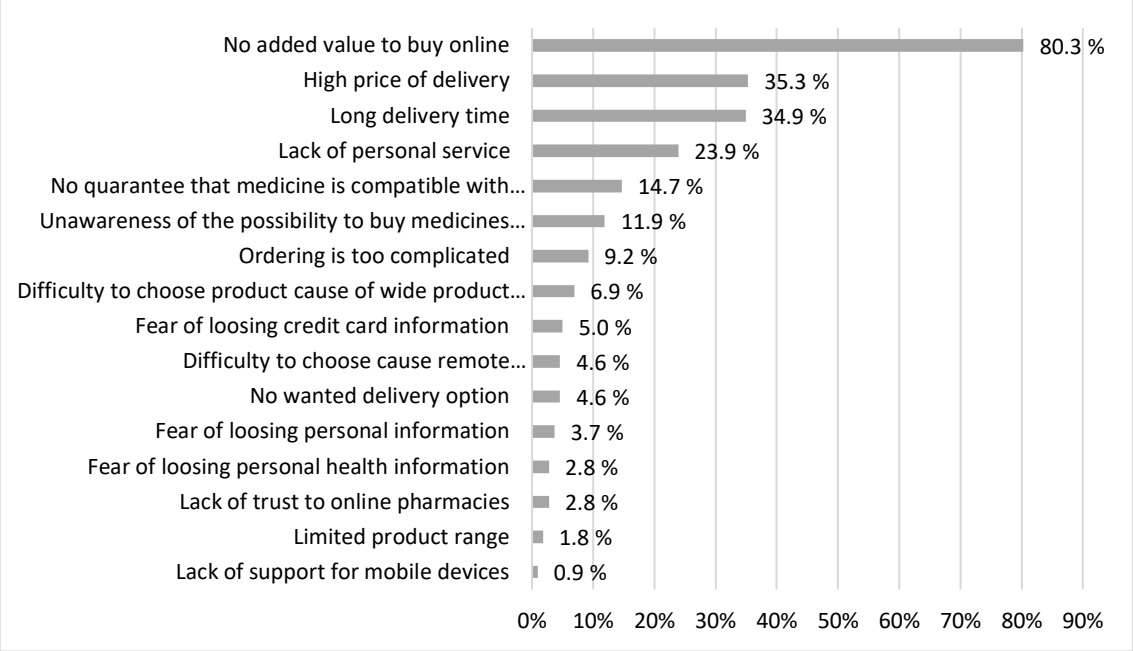

FIGURE 15: Barriers for the use of online pharmacies for the purchase of OTC medicines; response distribution of non-buyers (n=218) to question *"What prevents you to purchase over-the-counter medicines online?"* Respondent could pick more than one reason, so the sum is more than 100%.

Respondents were also asked to describe on their own words if there was any other reason preventing from using online pharmacies for purchasing medicines. Most common reason was that the problem or need is acute and the medicine should be get right away. *"Often the medicine is needed straight away and there is no possibility to wait for the delivery"*. Another popular reasons to be mentioned were linked to accessibility, time or easiness. Respondents described that the pharmacy is nearby their home or workplace or somewhere along their daily route and medicine is quicker or easier to acquire from there while already on move or going on errands. *"I live and work nearby many pharmacies and there is no reason to use online pharmacy." "Distance to the traditional pharmacy is 600 meters while nearest post office is situated 3 kilometers away. It is easier and quicker to visit traditional pharmacy."* In addition, appreciation of the services of traditional pharmacy was mentioned. Respondents had need or desire for personal advice in pharmacy or general desire for face-to-face contact. *"In traditional face-to-face contact it is easier to ask for example things that remain unclear than in writing at chat-service."* Defaults of online pharmacy service were also mentioned. Long or indefinite

delivery time, problems with the delivery or insufficient information was not appreciated. Summary of freely written reasons for not using online pharmacy is described in TABLE 5.

TABLE 5. Other reasons for not using online pharmacies. Response summary of non-buyers (n=218) to open question *"Is there any other reason that prevents you purchasing over-the-counter medicines online?* One respondent can have given multiple reasons.

No added value to buy online			**Personal characteristics**		
Distance (27)	**Time (17)**	**Easiness (14)**	**Need (28)**	**Appreciation of services of the traditional pharmacy (24)**	**Others (10)**
Pharmacy nearby (16) Same (5) or shorter (2) distance to pharmacy than post Product needs to be picked somewhere (4)	Product quicker from traditional pharmacy (16) No temporal/monetary added advantage (1)	Easy to visit pharmacy (6) Pharmacy visit while already on the move/going on errands (4) Prescription medicines from pharmacy, others at the same time (4)	The problem or need is acute (22) Rare need for OTC- medicines (6)	Need or desire for personal advice in pharmacy (12) Desire for face to face contact (8) Verification of medicinal compatibility (2) (Good) service of the traditional pharmacy (2)	Preference for brick-and-mortar stores (3) and their effect on employment (1) Unawareness of online pharmacies (2) Bad financial situation (2) The trouble of making the order (1) Lack of interest (1)
Defaults of online pharmacy service					
Delivery (11)	**Information (4)**	**Lack of trust (2)**	**Other (2)**		
Long or indefinite delivery time (6) Problems with the delivery e.g. disappearance or temperature control (4) Cost of delivery (1)	Insufficient information in online pharmacy (4)	Bigger trust in traditional pharmacy (1) Bigger trust in product bought from traditional pharmacy (1)	Defaults in online pharmacy operations Total price not cheap enough		

In addition to reasons found out with the survey, one thing emerged in the interviews; shopping in a traditional pharmacy out of habit. Interviewees described it has been a natural choice to purchase from traditional pharmacy and that they had not even thought of buying medicines online. Some of the interviewees had also strong impression that buying online is more expensive (cause of costs of delivery) and inconvenient (due to delivery somewhere else than home). Touching and feeling the products was also mentioned as a reason for not to buy medicines online.

7.5 Factors affecting the use of online pharmacies

The ease of ordering (86.2%, n=225), small cost of delivery (84.5%, n=218) and short delivery time (84.8%, n=218) were considered to affect very or quite much for the willingness to shop in an online pharmacy. In addition, wide product range (81.9%, n=213) and easiness of use of the online pharmacy web site (81.2%, n=212) were seen important. Around 70% of the respondents considered clear product pictures, multiple delivery options, confirmation of order and delivery and sufficient amount of information about medicine and its use at the online pharmacy web site to affect either very or quite much on their willingness to shop in an online pharmacy. Perceptions concerning the location of the physical store of the online pharmacy, overall visual look of the website and possibility for the delivery to somewhere else than home were more divided. Nearly half of the respondents (48.4%, n=126) considered it to affect very or quite much if the physical store of the online pharmacy is located nearby whereas 16.5% (n=43) thought it does not affect at all and 35% (n=91) thought it has very or quite small effect. Situation with the possibility to choose the delivery somewhere else than home and overall visual look of the online pharmacy website was pretty much the same. Factors affecting the willingness to shop in an online pharmacy are presented in FIGURE 16.

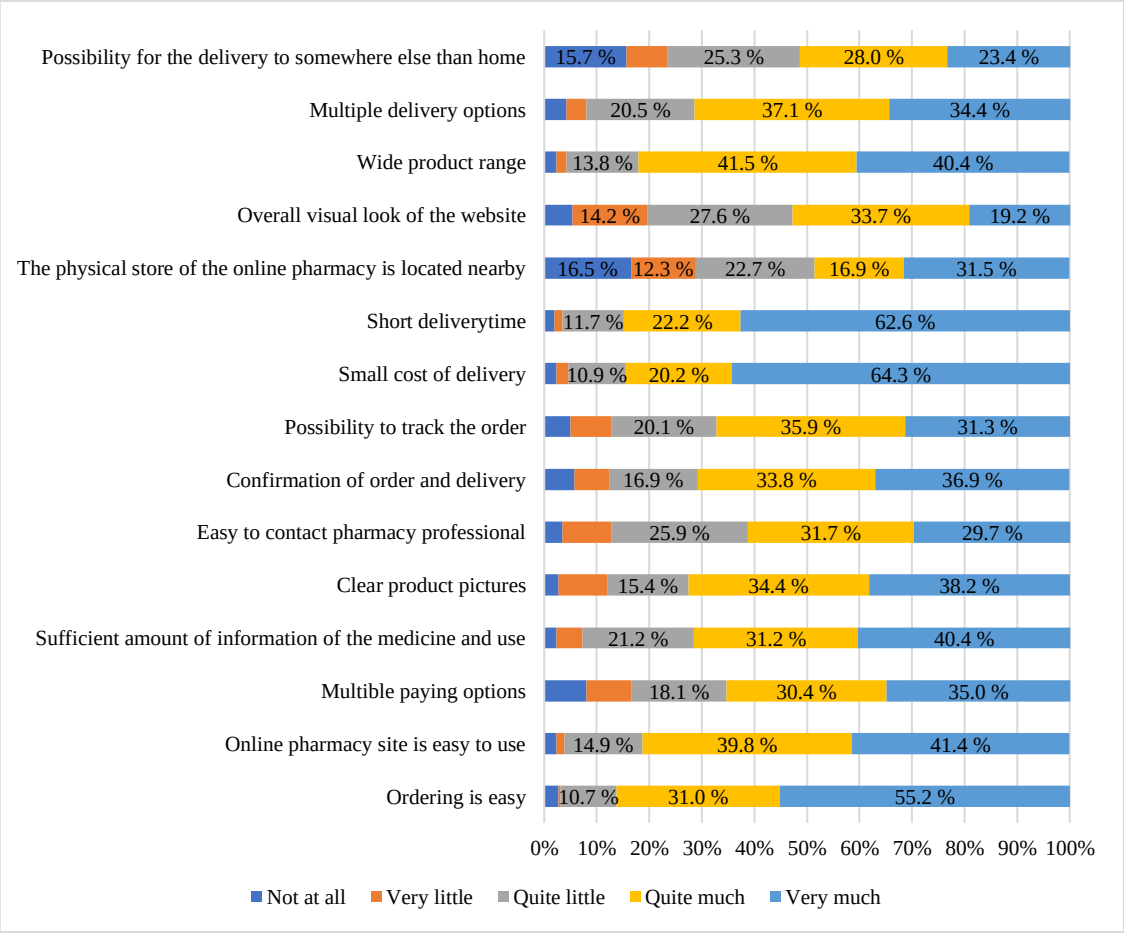

FIGURE 16. Factors affecting the willingness to shop in an online pharmacy; response distribution of respondents (n=262) to question: *"Evaluate, in a scale of 1-5, how much are following factors affecting your willingness to shop in an online pharmacy?"*

7.5.1 Perceived usefulness

Consumer perceived usefulness was measured with 8 statements regarding the potential benefits of the online pharmacy use for purchasing OTC medicines (FIGURE 17). The respondents were asked to evaluate each statement on potential benefits regarding their own attitudes on a 5-point Likert scale (1=strongly disagree, 5=strongly agree). A sum variable was formed to describe the overall perceived usefulness. The reliability of the answers on the consumer-perceived usefulness was calculated, and Cronbach's alpha was determined (0.809) suggesting the reliability value is satisfying. In a scale from 1 to 5 (1=useless, 2=quite useless, 3=not useless nor useful, 4= quite useful, 5=very useful) the perceived mean usefulness was 3.2 (SD 0.75).

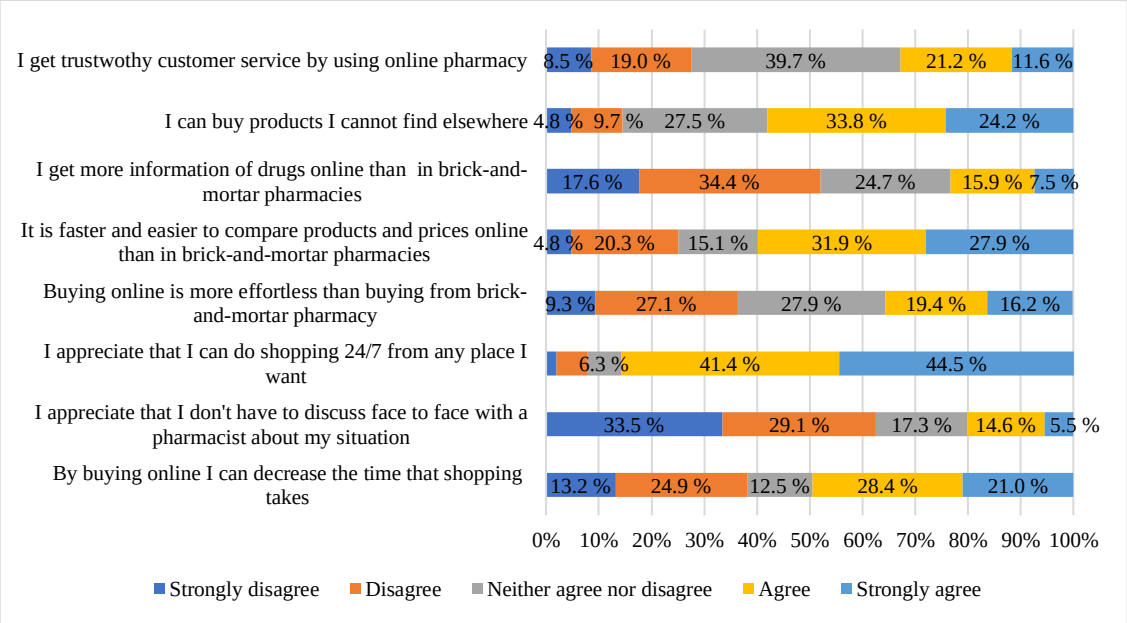

FIGURE 17. Consumer perceived usefulness. Respondents response distribution to question: *"Evaluate following possible benefits that are associated with buying medicines online."*

7.5.2 Perceived risk

Respondents were asked to assess possible risks that are associated with the online purchase of medicines. The greatest worry among respondents was that the compatibility of the medicine they use cannot be ensured, 35.1% (n=88) of the respondents (n=262) neither agreed or strongly agreed with this claim. The opposite opinion was prevailing though, while 53% (n=133) of the respondents disagreed or strongly disagreed with that claim. Worry of not getting enough information on the correct use of the medicine worried 23.8% (n=60) of the respondents and the fear that personal information will be handled in an unwanted way worried 21.5% (n=55) of the respondents. Respondents were most confident that the medicines bought from the online pharmacy are not harmful to their health, while nearly 90% reported disagreeing or strongly disagreeing with claim concerning this issue (88.6%, n=225). In addition, respondents trusted the quality and authenticity of the medicines bought online. Over 80% of the respondents disagreed or strongly disagreed that medicines bought from online pharmacy are either counterfeit or of bad quality (83.1%, n=215). Over 70% of the respondents also believed that worry of

not getting the right product cause of incorrect delivery or their paying information not remaining safe is not a big threat. Possible risks associated with the online purchase process of medicines is described in FIGURE 18.

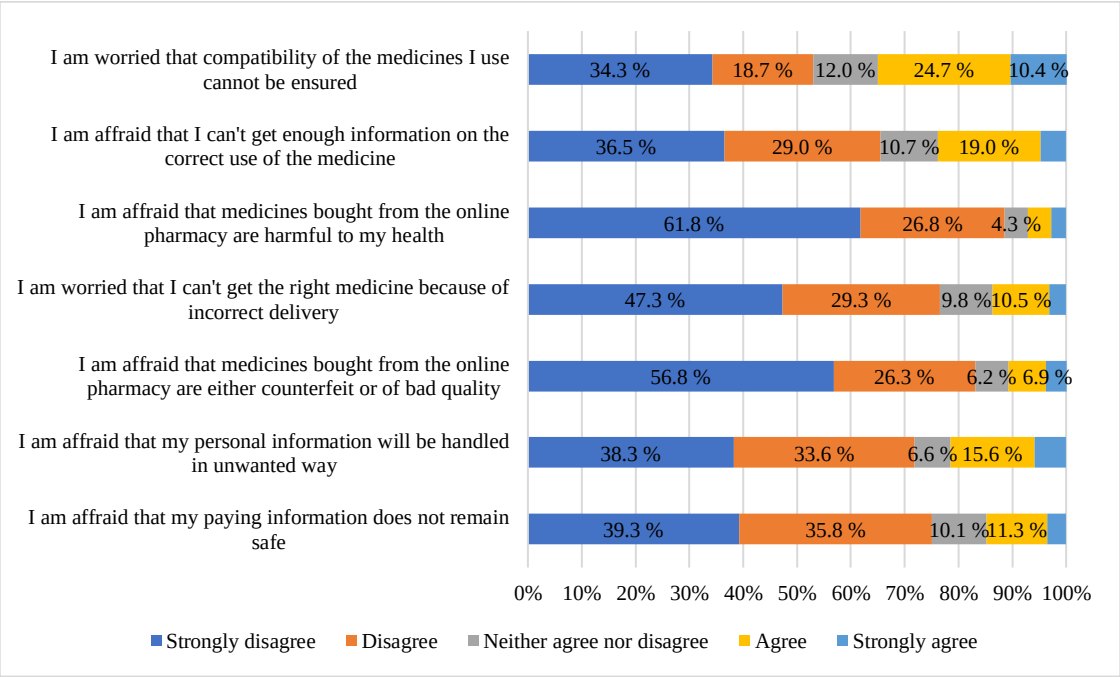

FIGURE 18. Consumer-perceived risk. Respondents response distribution to question: *"Assess following possible risks that are associated with buying medicines online."*

A sum variable was formed to describe the overall perceived risk. The reliability of the answers on the consumer-perceived risk was calculated, and Cronbach's alpha was determined (0.895) suggesting the reliability value is satisfying. In a scale from 1 to 5 (1=no risk, 2=small risk, 3=not small nor big risk, 4=quite big risk, 5=high risk) the perceived mean risk was 2.0 (SD 0.9).

7.5.3 Perceived ease of use

Consumer perceived ease of use was measured with 2 items regarding the potential ease of use of online pharmacies (TABLE 6). The respondents were asked to evaluate both items regarding their own perceptions on how much is the item affecting their willingness to shop in an online pharmacy on a 5-point Likert scale (1=not at all, 5=very much). A sum variable was formed to describe the overall perceived ease of use. The reliability of

the answers on the consumer-perceived ease of use was calculated, and Cronbach's alpha was determined (0.772) suggesting the reliability value is satisfying. In a scale from 1 to 5 (1=not important, 5=very important) the mean perceived ease of use was 4.3 (SD 0.81).

TABLE 6: Consumer perceived ease of use. Response distribution to question *"Evaluate, in a scale of 1-5, how much are following factors affecting your willingness to shop in an online pharmacy?"*

Perceived ease of use	Ordering is easy		Online pharmacy site is easy to use	
	n	%	n	%
Not at all	7	2,7 %	6	2,3 %
Very little	1	0,4 %	4	1,5 %
Quite little	28	10,7 %	39	14,9 %
Quite much	81	31,0 %	104	39,8 %
Very much	144	55,2 %	108	41,4 %
Total	261	100,0 %	261	100,0 %

7.5.4 Preference of internet as an OTC medicine information source

More than half of the respondents of the survey reported internet as their most preferred source of OTC medicine information before purchase (53.1%, n=138). Pharmacy staff was preferred by 35% (n=91) of the respondents and doctor by 5% (n=13). Most preferred sources of OTC medicine information before purchase is presented in FIGURE 19. None of the demographic variables had significant meaning for the preference of internet as an OTC medicine information source (p-values between 0.085 - 0.790).

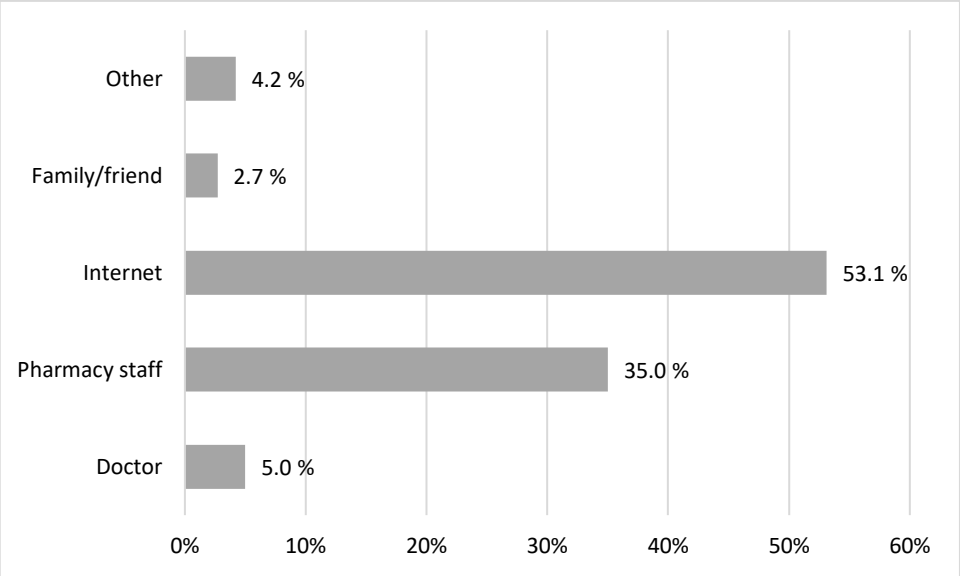

FIGURE 19. Most preferred sources of OTC medicine information before purchase. Respondents (n=262) response distribution to question: *"From whom or where do you acquire information of OTC medicines before purchase. Choose the most preferred option."*

Respondents were also asked to assess claims concerning acquisition of medicinal information from the internet. Finding information from the internet was familiar to 90.1% (n=229) of the respondents (n=262). Only 4.4% (n=11) reported it was difficult to find information of OTC medicines. Nearly all of the respondents (97.3%, n=247) agreed or strongly agreed that they were able to find information of OTC medicines from the internet. In addition, most of the respondent found out that the amount of information they find from the internet is sufficient (83.7%, n=201). Most respondents also thought they were able to sort out, which information of OTC medicines is reliable (89%, n=227) and that the information they find from the internet is useful (89.7%, n=225). Respondents perception of acquisition of medicinal information is described in FIGURE 20.

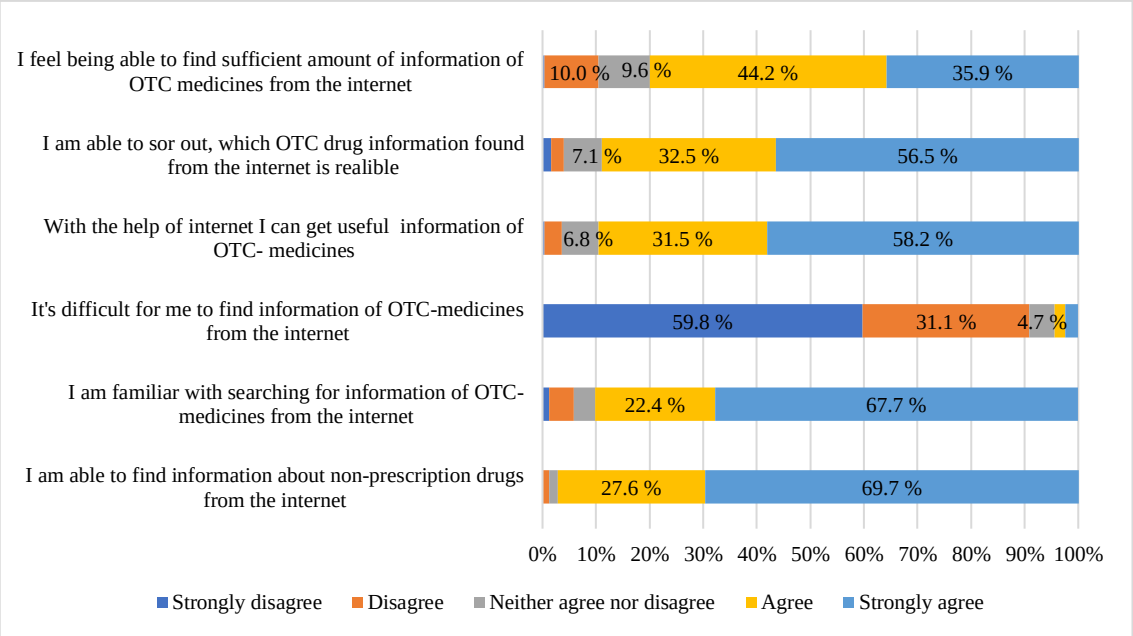

FIGURE 20. Acquisition of medicinal information from the internet. Respondents response distribution to question*: "Asses the following claims concerning acquisition of medicinal information."*

7.6 Factors increasing the desire to buy OTC medicines online

Cheaper price of the medicine in online pharmacy was the most common factor while asked about factors that could help making the decision to purchase medicine online instead of traditional pharmacy (88.2%, n=231). Other popular factors that could help turning to the online pharmacy were possibility for a real time advice in online pharmacy for example through chat-service (36.6%, n=96), price and delivery information of the medicine available already at the pharmaceutical company website (29.4%, n=77) and additional services, such as the possibility for the delivery together with for example online purchase of groceries (27.9%, n=73). Those who had chosen the option "other" had the possibility to specify their answer. Most comments were concerning the delivery (n=9). Respondents were hoping free (n=2) or fast (n=2) delivery and free, cheap or fast delivery to home (n=5). No pharmacy nearby was also mentioned (n=3) as well as clear and practical web sites (n=1) and gratuities (n=1). Factors that could help making the decision to purchase OTC medicines online are presented in FIGURE 21.

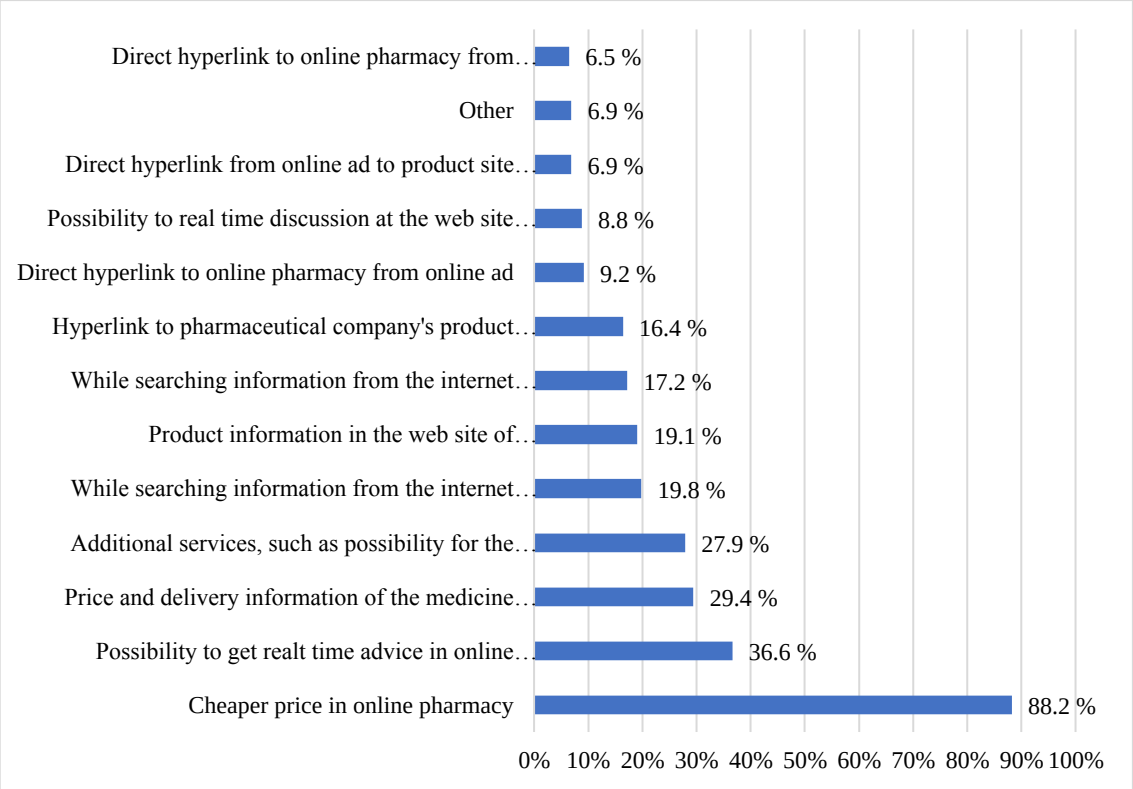

FIGURE 21. Factors that could help making the decision to purchase OTC medicine online. Response distribution of respondents (n=262) to question: *"What could help you to make a decision to purchase medicine from online pharmacy instead of brick-and-mortar pharmacy?"* Respondent could pick more than one reason, so the sum is more than 100%.

In addition, respondents who had not purchased medicines online (n=218) were asked to describe on their own words which factors could get them to buy or consider buying medicines from online pharmacy. Responses fell into four main categories: online pharmacy service characteristics (n=135), buyer characteristics (n=64), faults of traditional pharmacy (n=10) and others (n=5). Most common factor that could get consumers buy medicines online was price (n=72). Respondents wished for cheaper price of the product than in traditional pharmacy (n=33) and free or inexpensive delivery (n=30). In addition, delivery of the product was felt important. Respondents would appreciate fast (n=20) and reliable (n=3) delivery and multiple delivery options (n=14). Accessibility was another appreciated factor (n=33). Respondents described they could buy online if there was no pharmacy nearby their home or workplace (n=23) or if they would have limited ability to move (n=10). Factors relating to need was also mentioned

(n=19). Respondents described that if the need is not acute (7) and there is a need to use OTC medicines more often or buy larger amount at a time (n=9), then online pharmacy could be of use. If the product is not available in the local pharmacy was another reason to get respondent consider buying online (n=9). Factors that could ease buying OTC medicines online are described more in depth in TABLE 7.

TABLE 7. Factors that could ease buying OTC medicines online. Response distribution of non-buyers (n=138) to open question: *"Which factors could get you to buy or consider buying medicines from online pharmacy?"*. One respondent can have given multiple reasons.

Online pharmacy service characteristics (135)						
Price (72)	**Delivery (37)**	**Website (9)**	**Customer service (9)**	**Product range (7)**	**Payment (1)**	
Cheaper or reasonable price (33) Free or inexpensive delivery (30) Discounts (4) and offers (5)	Fast delivery (20) Delivery options (14) Reliable delivery (3)	Sufficient information (4) Better product pictures (1) Website easy to use (2) / Ease of buying (2)	Service to ensure medicinal compatibility (4) Possibility to ask for advice (e.g. Chat) (4) Reminder-service (1)	Wide product range (4) Possibility to order prescription medicines online also (3)	Payment method options (1)	
Buyer characteristics (64)				**Shortcomings of traditional pharmacy (10)**		**Others (5)**
Accessibility (33)	**Need (19)**	**Awareness (4)**	**Others (8)**	**Product availability (9)**	**Limited opening hours (1)**	**Others (5)**
No pharmacy nearby (23) Limited ability to move (10)	Increased need or need for bigger amount at a time (9) Not an acute need (7) Ability to predict need (3)	Awareness of the possibility to buy medicines online (4)	Product familiarity (3), Embarrassing ailment (2) Security and safety (2) Hurry (1)	Product not available in traditional pharmacy (9)		

7.7 Customer journey

7.7.1 Information search

The amount and channels of the information search depended on the familiarity of the symptom and medicine. Interviewees stated that if the symptom or disease is something they have had before, then there is no need to find information and compare different alternatives and the same product bought earlier is purchased. In case the problem is new, it depended on the severity of the symptom what channel was used to search information. Some of the interviewees told they easily turn to the doctor for advice even if the symptom is slight. *"Today visiting occupational health is so easy, that it is easiest for me to go there." "I easily turn to the doctor…or to say at least, book telephone appointment to the doctor." "I have heard, from the doctors mouth, that these self-diagnoses should not be made…"* However, most commonly the internet, and Google to be more specific, was the channel of choice to find information before purchasing new OTC medicine. *"I google everything I am ever looking for, I do not know how life would be without google…" "I usually write everything on google…"*

With the help of google, interviewees told they learn from the symptoms, what disease could those mean and how could it be treated. *"I would go to the Terveyskirjasto to read about the symptoms and there is this point "what can you do by yourself", like self-care, and if it strongly says or gives something that matches my symptoms perfectly, then I could think of buying it (the medicine) by myself…" "I should get adequate confirmation that it is heartburn…"* Side and combined influences were also sought from the internet as well as package leaflets and dosage instructions. *"If I have some other regular medication, is it compatible with that…and can it be used during pregnancy or breastfeeding…" "We are constantly seeking dosage instructions…"*

Interviewees stated, that information found from the Internet is necessarily not enough, however, and it was commonly told that there is a need to ask for advice or seek confirmation to information found by themselves from someone else. Important others such as friends or relatives was mentioned by many as from whom they ask for advice

and get actual user experiences and peer support. *"Google is the most significant source, but maybe just those acquaintances who have children…" "I would ask for advice from some other people, some friend…I would need someone's experience and opinion of the issue, experience that someone else has used something before anything."* User experiences and peer support were also sought from the internet. In addition, some of the interviewees had turned to pharmacist for an advice, especially to FIGURE out what the differences between different products are or compatibility with other medicines. Chat-pharmacist was considered as useful help, in case that there actually is someone in place to answer. *"I would definitely utilize it (chat-service). But it has to be so, that someone really answers…I have no nerves to wait very long, because there is so many other companies, that offer same services, I quite quickly change the site then."* Advertising and newspaper articles had also been used as an information source as well as a mean of noticing that a need exists.

There appeared to be a big need for different comparisons while searching information. Price comparison was mentioned quite often and interviewees exposed that there would also be need for a site that would compare different treatment options and different products, what are the differences with those and so on. *"…If there would be some kind of comparison site, where is kind of all information, and the differences of those (parallel medicines) would be visible in some comparison table, oh, that would be my favorite." "I would like to do some price comparison…"*

7.7.2 Purchase decision and finding the online pharmacy

Interviewees were asked whether they have made the decision what to purchase before going to the pharmacy. Situation was bit divided depending on if the product is new or used already before. If the product was known before, then the purchase decision was usually made beforehand. But in case the product is new, interviewees longed for price comparison and advice from the pharmacist in the pharmacy. *"I am kind of loyal to a brand, but if I think of a new problem to come…maybe I then would compare the prices and ask for a help, if it is like unfamiliar medicine."* In addition, some of the participants told doing some impulse purchases from time to time.

Participants of the interview were asked how would they think they will find the online pharmacy. All of the participants stated, that they would use google as means of finding the pharmacy. *"Google open, 'pharmacy', as a key word, or then straight 'online pharmacy' or 'painkiller and home delivery'..."* Some stated they would use the active ingredient of the drug or product name as a keyword or end up to the online pharmacy through the symptom search.

In the survey, those who already had bought medicines online were asked how did they end up to the online pharmacy. Most common method was to use search engine such as google (67.4%, n=29) and straight to the online pharmacy arrived 44.2% (n=19) of the buyers. About one tenth ended up to the online pharmacy through an ad of the online pharmacy (11.6%, n=5) or used service of the online pharmacy they usually visit (9.3%, n=4). Ways to end up to the online pharmacy are described in FIGURE 22.

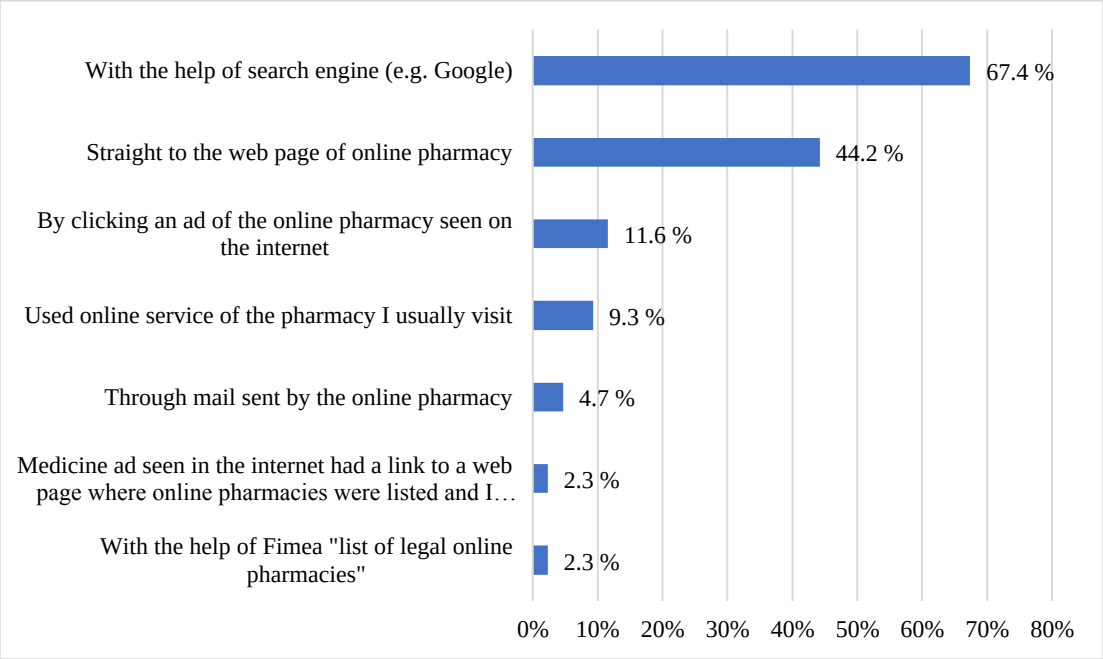

FIGURE 22. Ending up to the online pharmacy. Response distribution of buyers (n=43) to the question: *"How did you end up to the webpage of the online pharmacy?* Respondents could choose more than one option.

7.7.3 Google quick links at the google ad or webpage of the medicine

Interviewees felt that it depends on the situation on what information is needed at a time, but all of the participants mentioned they would like to have a quick link to symptoms and causes of the disease. *"…reasons and causes…so that you can be confirmed that it is heartburn if you think you have a heartburn".* Different treatment options or product and price comparison was also considered important by most of the interviewees. In addition, package leaflet, use instructions or side effects was felt useful as well. *"..I definitely would like to read the same that comes with the medicine package, the instructions…" "If I am looking for information about side effects or symptoms, so I do not have to click first to the page of the manufacturer and then like maybe search the product again from there and then the package leaflet and then scroll the PDF-package leaflet down to part X where the side effects are…*" Buy from online pharmacy or where to buy was regarded useful if asked about it. *"It would not do any harm if there was such an order here-button…".* "*If I had clear specifications already, then that buy from online pharmacy could work…".* Preferred quick links at the google ad or product page of the medicine are represented in FIGURE 23.

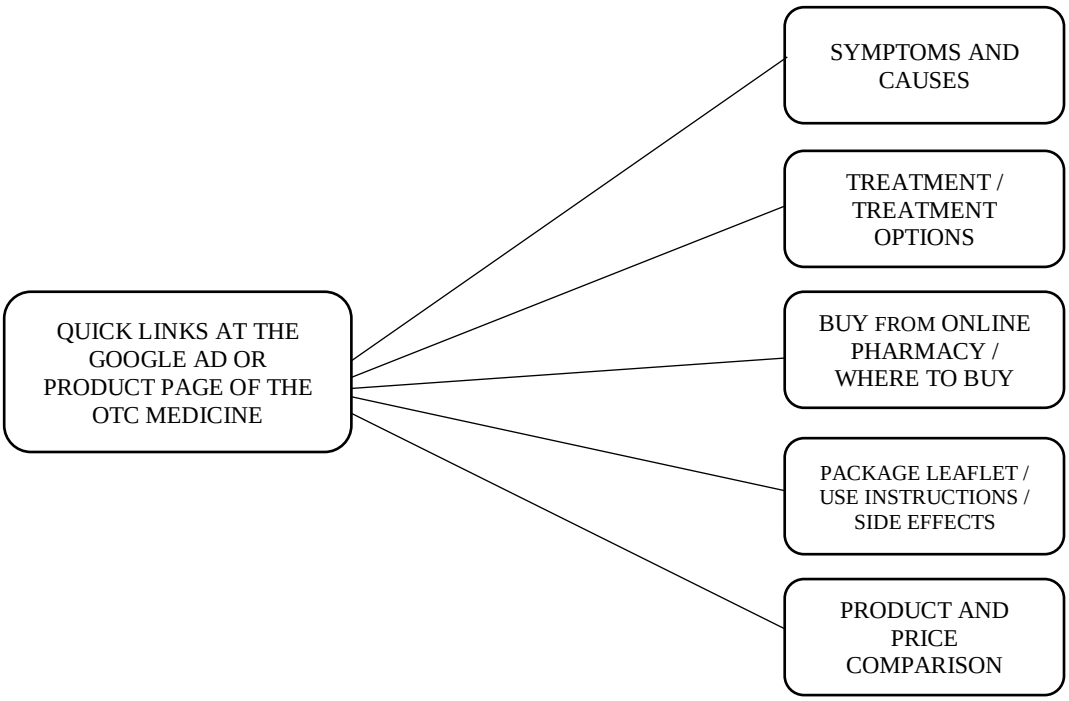

FIGURE 23. Preferred quick links at the google ad or product page of the medicine

It was highlighted, that the awareness of the pharmaceutical company affects the intention to click the ad or product site, regardless of what quick links it contains. *"In addition, my choice might affect if I have heard the name of the medicine or the pharmaceutical company, if it is completely strange…which I do not know, I would not click it…"* Overall, the interviews felt that there should be found all essential information in few sentences, like which medicine and for what it is. *"…so that the information would be predigested for me already"*.

7.7.4 Presentation of online pharmacies at the webpage of the pharmaceutical company

One aim of this study was to explore how could the pharmaceutical company ease the customer journey for the online purchase of OTC medicines. There can be found a listing of online pharmacies at the webpage of the pharmaceutical company, and the aim was to FIGURE out by what criteria should the online pharmacies be listed. One theme at the interviews was focusing on this.

Interviewees highlighted that it should be made easy to make the choice, so that it could be seen at a glance which pharmacy to choose. *"As a consumer you feel so stupid, if I kind of, that I have hundred pharmacies here, and none of these says nothing to me and then I randomly choose…so I should be helped here, helped such as it would be kind of clearly brought out some pharmacy…"*. Most of the interviewees would like to choose the online pharmacy from the list on the grounds of familiarity. Online pharmacy logos were mentioned as means to find familiarity and visuality was felt important overall. Participants described, that pure listing without any visuality is boring and difficult to read. *"In my opinion pure list is nightmarish, basically you should then read through the list… if I would saw this kind of list, most probably I would lose my interest at that point." "If it would come that kind of list, ah, there is like hundreds, I am not able, I will leave it at that…"*.

Besides online pharmacy logos most of the participants would like to see the product picture and price interrelated with the link. The size of the package should be connected with the price, so that it would be easy to compare the prices. The smallest package size was suggested, so that it would look tempting offer to buy. In addition, some kind of service promise was felt an important way to stand out from the others. Interviewees suggested that pharmacy could be profiled as something, for example as pharmacy for families with children or they could make promise of time, price and/or method of delivery. It was suggested to highlight the wide selection of the pharmacy or the practical experience the pharmacy has from the e-commerce to inspire confidence for example. On the other hand, participants wanted a lucid style to be used and not too much information presented. *"The page will be quite unclear if there is too much information. In my opinion there should be only logo at that point…"*. It was also wondered if it is possible to represent for example the price and type of the delivery in a realistic way. Preferred information in conjunction with the online pharmacy link at the web page of the pharmaceutical company is presented in picture 24.

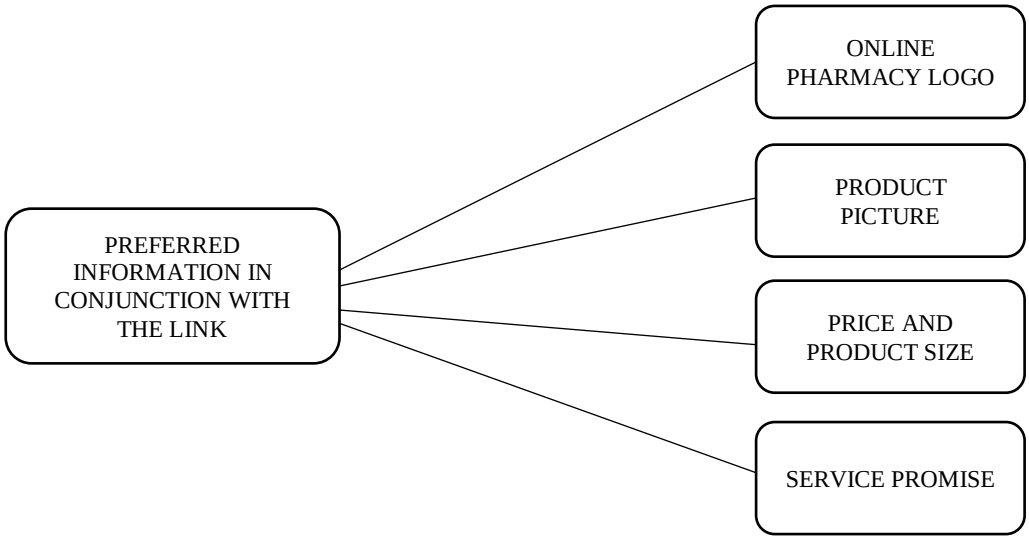

FIGURE 24. Preferred information in conjunction with the online pharmacy link at the web page of the pharmaceutical company.

Price and availability of the product was most commonly mentioned criteria in which order to list the online pharmacies. Participants felt, that it would be good to have the

pharmacies listed according to where it can be bought at cheapest and / or where it is available (in what amount). *"…I would firstly like to list according to availability, where the product could be found at the amount I need…and then if there is differences with the price…" "…if there would appear pharmacies with logos and the price would also be in visible, in my opinion it would be the very best…"* Wide selection of products was also felt important criteria. Participants wanted to shop in an online pharmacy that offers wide selection of different products, so that all they need could be bought from the same place at the same time.

Location was also mentioned by most of the interviewees, but the significance of it was bit divided. A few interviewees felt close location could be one criteria to list the pharmacies, but on the other hand, others felt that location has no significance while speaking about e-commerce. It was felt that if location has something to do with the quickness of the delivery, then it would gain some weight. *"Location is not that important, it does not matter from where it comes, as long as it comes quick". "…it would be logistical advantage if it comes from somewhere near…and the environmental damage would also be smaller, in that case location would be, but I cannot find anything else from the location.*" In addition, it was felt that if there are pharmacies of equal value, somehow it could be natural to choose the one closest. *"But maybe this much that if there is side by side pharmacies that are from Greater Helsinki area and from Oulu for example, so most probably I would choose the one in Greater Helsinki area because I live here".*

Other mentioned criteria to list the online pharmacies were size, recognition or popularity of the pharmacy and the quality of the online pharmacy website. *"Maybe so, that it could be from bigger to smaller, like from bigger or well-known to smaller…". "If there is differences with the online pharmacies, that one has clearer and more user friendly web pages than the other, I would preferably like to be drawn into there."* In addition, some kind of search system was longed by some interviewees. *"If there could be put some kind of locality search, it would be convenient". "But maybe such search would work best compared to list which you click by yourself".* Suggested search attributes were location

and price. Preferred criteria to list the online pharmacies at the pharmaceutical company web page are presented in FIGURE 25.

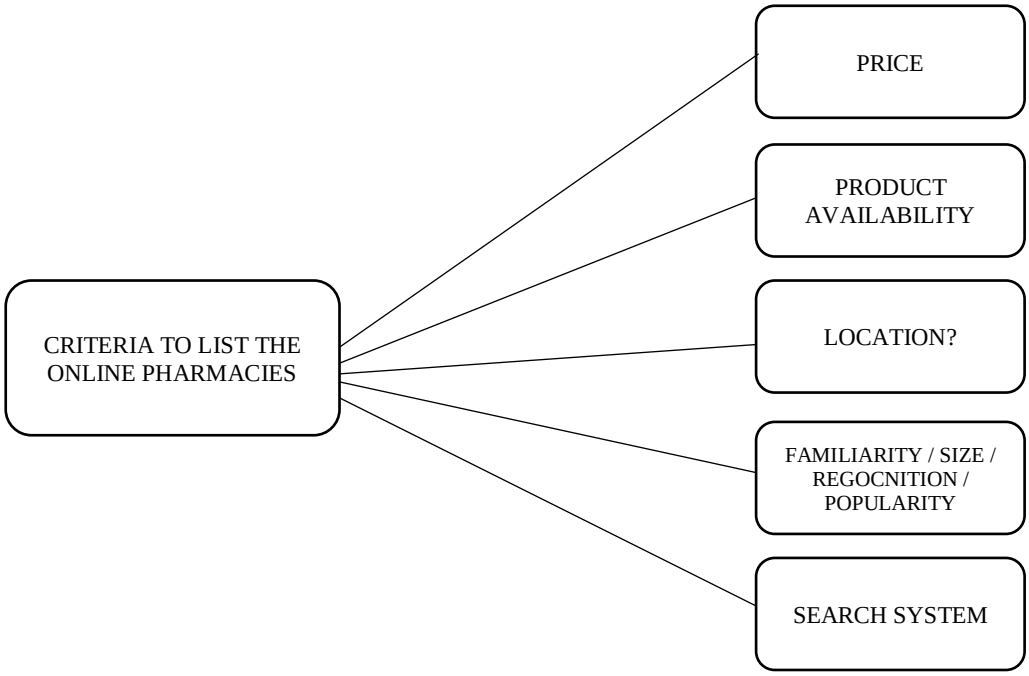

FIGURE 25. Preferred criteria to list the online pharmacies at the web page of the pharmaceutical company.

8. DISCUSSION

8.1 Main findings

8.1.1 The use of online pharmacies and drivers for the use

In this study the amount of those who had purchased OTC medicines online was 16.5%, which is quite much higher proportion compared to 3% in the study made by OFS at 2018 (OFS, 2018). Also the amount of those who had purchased other pharmacy products online was comparatively much higher than in earlier studies (36.2% vs. around 20%). One explanatory factor can be that the population of this study was people of the Greater Helsinki area while the population in other studies was whole Finland and people at this area can be more into online shopping overall. Another explanatory factor can be that

participants were roped in by using Social Media and those using Social Media probably use internet more also for other purposes than those who do not use Social Media. In addition, those who are interested in this topic could have been more prone to participate in the survey and interviews. In addition, although carefully explained what is meant by OTC medicine, respondents may have confused OTC medicines to other pharmacy products. In the interviews it became clear, that it is quite difficult for people to separate which product are OTC medicines and which are not.

The biggest drivers for the use of online pharmacies for the purchase of OTC medicines in this study were possibility to shop where and whenever, convenience, time saving and unwillingness to use time for queuing. Generally online stores are used cause of convenience, wide selection, and cheaper prices and because it saves time and is easy. According to earlier studies online pharmacies are used for the same reasons (Gurau, 2005, Heinonen, 2013, YouGov, 2018). Results of this study are similar to those done earlier at the pharmaceutical sector and in general concerning e-commerce, with the exception of cheaper prices. Cheaper price of the product is usually a big driver to shop online, but in Finland the price of the OTC medicine is the same regardless where it is bought. This study shows that the total price, that is the medicine with the delivery cost, is seen more as a barrier than motivator to shop in an online pharmacy. In addition to cheaper price, wide product range was not appreciated as high as in earlier studies. However, earlier studies made in Finland are not made concerning purely OTC medicines.

8.1.2 Barriers for the use of online pharmacies

Over 90% of those who had not purchased medicines online reported they could consider buying those, and over 50% of all respondents reported they would probably buy medicines online in the future. So there are a lot of potential buyers at the market. The biggest barrier for the use of online pharmacies for the purchase of OTC medicines was that it does not have any additional value compared to buying from traditional brick-and-mortar pharmacies, the medicine is easily and quickly acquired from traditional pharmacy. Other perceived barriers were high cost of delivery, too long delivery time and

lack of personal service. In addition, need for the OTC medicines was described to be acute by nature and the network of pharmacies was said to be so dense that the medicine can be acquired more easily and quicker straight from there. Results are a bit controversial, while time saving was mentioned both driver and barrier for the use of online pharmacies. This can be explained by the fact that people appreciate different things while thinking about their use of time. One can think it saves time while the order can be placed anytime and anyplace and the other can appreciate that it saves time while it does not have to be waited for the delivery.

Generally, privacy and security, lack of customer service, lack of social interaction and expensive price are factors that are considered as barriers for online shopping (Ahuja et al., 2003). At the pharmaceutical sector general lack of trust for e-commerce and service characteristics such as verification of medicinal compatibility are seen as barriers (Spain et al., 2001). Results of this study differ quite much from these with the exception of the lack of personal service and service characteristics. At this study, overall risk in buying OTC medicines online was considered quite small and there was not found much lack of trust in online pharmacies or the medicines acquired from those. This can be due to the overall good reputation of Finnish pharmacies and the strict regulation of the pharmaceutical sector in Finland. At the interviews it was described that one could not even think that Finnish online pharmacy would not be legal.

The network of brick-and-mortar pharmacies at the Greater Helsinki area is quite dense and visiting those is considered very easy and effortless and cause there is no price competition with the OTC medicines, it was not seen useful to use online pharmacies. It may be, that cause the easiness of shopping in traditional pharmacies the time and price of the delivery were considered as barriers. Another reason could be, that people have negative perception of the delivery time and price and they actually do not know how it really is. This study indicates, that consumers have been quite satisfied with the traditional pharmacy system in Finland and there has not been any reason to think about other options. Participants of the interview told that if there would be more advertising and the awareness of the online pharmacy services would be higher, the threshold to try would definitely be smaller.

8.1.3 Factors that could facilitate overcoming the customer perceived barriers

Cheaper price of the OTC medicine was by far the most common thing that could get people buying OTC medicines online. Another thing was either free or cheap and quick delivery preferably straight to home. In addition, buying online was described to be a good option if there would not be pharmacy nearby or the ability to move would be restricted. As the cheaper price is one the biggest drivers in the e-commerce in general, it can be thought that if the prices of OTC medicines would be released for competition in the future, the proportion of online buyers could increase. The same would probably happen if the network of brick-and-mortar pharmacies would be more sparse and it would not be so easy to visit those. However, these are factors that are not in the hands of online pharmacies or pharmaceutical companies.

Today many online pharmacies already offer multiple delivery options and free or quite cheap delivery, so it might be of help if they would promote their services more aggressively to get the awareness of their services higher. It is clear that it can be tough to compete with the quickness of the delivery while current use of traditional pharmacies is so easy. By optimizing and developing the delivery options and setting the prize at reasonable level there could be some increase in those buying medicines online. It was also found out at this study that people are willing to buy multiple products at the same time. One incentive for the use of online pharmacy for the purchase of OTC medicines could then be if other pharmacy products are or would be cheaper in the online pharmacy, so the medicines would be the by-product to buy. This would require more advertising and increasing the awareness among pharmacy customers.

8.1.4 Online customer journey

Online customer journey for the purchase of OTC medicines was explored in this study to gain insights into how pharmaceutical company could facilitate the journey. According to this study the online customer journey for the purchase of OTC medicines follows quite well the general five-stage decision making model, that is need recognition, information search, evaluation of alternatives, purchase decision and post purchase behavior. It could

be shown that consumers engage into all those phases, while purchasing unfamiliar medicines. It was also found out that if the medicine is known beforehand, then some stages or even all intermediate stages can be entirely skipped and some impulse buying also exists.

At this study, internet turned out to be the most common channel to search for information before purchase, while over 50% of the respondents of the survey stated using internet as their first choice. Pharmacist was the second common information source and doctor the third. Finding information from the internet was regarded familiar, useful and easy by around 90% of the participants and most of them believed the information they find is sufficient and they are able to separate which information is reliable and which is not. At the interviews, the participants told they would be able to self-diagnose themselves with the help of the information found on the internet together with the experiences and perceptions of important others. Pharmacist was also regarded as useful help particularly in comparing generic products. Online pharmacist (e.g. Chat-pharmacist) was regarded as sufficient help, but it was highlighted that it has to be real-time, otherwise it would not be of use.

From the internet, and Google, to be more specific, people searched information from symptoms, diseases and treatment of those at the first place. Package leaflets, dosage instructions and side effects were also popular issues to look for. Need for different comparisons about differences of the medicines and prices of those emerged from this study. It was felt difficult to compare the products, especially if the active ingredient is the same, but the price difference is high. It was felt, that in many categories there is so much different options to choose from, that it is impossible to know what the differences are and comparison tables or sites was proposed as a solution for this.

The same issues that were searched from the google were those that were wanted to be accessible at the google quick links of the product webpage or google advertisement. This is natural, while the information wanted would like to be founded as fast as possible. “Where to buy” or “Buy from online pharmacy” -link was also regarded useful while asked about it. In addition, online pharmacy was most commonly found through the

google search, which supports the need for the “buy here” link also at the quick links of the product page or google ad of the medicine. From this “buy here” link people would like to be directed on a visually well-designed page, that contains different online pharmacies listed according to product price and availability, wide selection or familiarity, popularity and awareness. Online pharmacy logo, product picture and price and some kind of service promise was felt useful to exist with the link and pure listing was disliked. It was highlighted, that the choice should be made quick and easy for the customer, and familiarity was mentioned most commonly as a reason to choose some pharmacy over others. The opinion of the location of the pharmacy was polarized. Somehow it was felt natural to choose pharmacy that is located nearby, but others thought that at the e-commerce it does not have any matter and only the place of delivery matters.

If the medicine was not familiar, the purchase decision was most commonly not made until at the pharmacy. At the pharmacy people would like to compare prices maybe with the help of the pharmacist. This emphasizes the role of the pharmacist as a salesperson, and the importance of keeping the pharmacist informed of the products of the pharmaceutical company. From this point of view, it is also important for the pharmaceutical company to make sure to be included to the selection of the online pharmacy and provide the online pharmacy with proper and appealing product information text.

8.2 Validity and reliability of the study

Study validity can be defined as the ability of the research method to measure the things it should be measuring (Hirsijärvi et al., 2004). In this study methodological triangulation was chosen to get more comprehensive and truthful idea of the acceptance and use of online pharmacies for the purchase of OTC medicines. Quantitative survey aimed at acquiring more generalizable data of drivers and barriers for the use of online pharmacies and factors affecting those. Qualitative interviews aimed at acquiring more in depth knowledge about the online customer journey for the purchase of OTC medicines and also about the barriers for the use of online pharmacies. Using methodological triangulation increases the validity of this study.

Further, questions for the survey and interviews were carefully selected and validated questions used in relevant prior studies was utilized when possible. The amount of questions was adjusted so that it took no more than 10-15 minutes to answer the survey and themes in the interviews so that the interview lasted around one hour at maximum. Also, the layout of the questionnaire was designed in a way that it was attractive and easy to answer. The survey questionnaire was validated by piloting before starting the actual survey. Six respondents answered the questions and checked it for spelling and clearance and time it took to answer. Face validity was ensured by asking respondents to evaluate functionality of the questions with respect to content and also ensure they understand all questions correctly. A few changes were made based on their comments. Construct validity was ensured by opening up every construct used that may not be understood correctly. The framework for the interview was also piloted by one focus group interview with 5 persons before starting the interviews and only slight changes was made.

Study reliability can be defined as the repeatability of the results (Hirsijärvi et al., 2004). Providing of non-accidental results was ensured by describing the used methods and analyses precisely. Due to the method of data collection at the survey, the response rate could not be calculated. There were 262 respondents at the survey and they were quite equally from every city of the Greater Helsinki area except Kauniainen. In the interviews only one participant came from Helsinki and the others from Espoo. However, in the Greater Helsinki area cities are highly similar in regard to pharmacies and the sample can be seen representative of this area. Age, education and occupation distribution was wide, but the amount of students and people aged between 25-34 was relatively high. This is probably due to the fact that people at that age are the ones using internet the most and students may have been more prone to participate in master's thesis surveys than other groups. In addition, most of the participants of the survey and interviews were female and hence the results are only indicative. However, it can be thought that women are commonly the ones that buy medicines more often than men and may hence have been more interested to participate in this study.

Content analysis of the open questions and interviews was made in close collaboration with the Thesis supervisors and another person checked the categorizations made by the

researcher, which increases the reliability of this study. There are no relevant studies at which some of the results of this study could be compared while for example barriers for the use of online pharmacies has not been studied earlier at this extent. However, the transparency of the execution of this study makes the confirmability higher.

All the respondents of the survey and participants of the interviews lived in the Greater Helsinki area and had hence traditional pharmacies nearby their home or daily routes. People who live further from traditional pharmacies might have different perceptions of the acceptance and use of online pharmacies and hence the results of this study cannot be generalized to concern whole Finland. However, in Finland the network of pharmacies is quite dense throughout the country, and the number of those who actually live very far from pharmacies is relatively small.

8.3 Future directions

The subject of this study is quite hot issue at the moment. Consumers are more familiar on buying goods and services online and the trend has also been increasing at the pharmaceutical sector. This study was made concerning the online purchase of OTC medicines at the Greater Helsinki area. The issue could be studied in the scale of whole Finland in the future, as well as concerning the purchase of any goods available at the online pharmacies to get deeper understanding of the online pharmacy use.

9. CONCLUSIONS

Based on this extensive study about consumer perceived drivers and barriers for the use of online pharmacies for the purchase of OTC medicines, the barriers are currently dominating and only about one sixth of the residents of the metropolitan area have bought medicines online by far. However, the majority of non-buyers would be ready to consider buying medicines online. The overall perceived risk in buying medicines online was considered small, but the perception of usefulness was more divided and considered as neutral. The main barrier, lack of additional value and quick and easy accessibility of brick-and-mortar pharmacies, is sort of thing that neither online pharmacies or

pharmaceutical companies can do much about. The pricing of the OTC medicines cannot be influenced either, at least yet. However, the pricing of other pharmacy products is free, and cheaper price of those could work as incentive to use online pharmacies also for the purchase of OTC medicines as it was highlighted that consumers are willing to buy multiple products at the same time from the same place. Developing and increasing the awareness of delivery as well as real-time chat services would certainly be of help in overcoming the perceived barriers. Although almost 90% reported they were aware that medicines can also be bought online, it came out that one reason not to purchase medicines online was that it does not even have come to mind. Considering this, a greater awareness of online pharmacy services would be of great help.

Exploration of the online customer journey for the purchase of OTC medicines gave important insights into what kind of information is needed and from which channels before the purchase of OTC medicines. Internet turned out to be the primary source of information and in addition to basic information about symptoms, diseases and options to treat those, information about side effects and medicinal compatibility, package leaflets and dosage instructions were desired. Furthermore, need for price and product comparisons was apparent. It turned out that people consider being able to self-diagnose themselves with the help of information found from the internet, but opinions and experiences of important others and advice from pharmacist are of great help.

Pharmaceutical companies can facilitate the online customer journey by providing wanted information as a quick links connected to their product sites at google search and providing possibility to find the online pharmacy directly from the product page or through a quick link at online ad or google search page. In addition, the choice of online pharmacy from this list should be made easy for the customer by providing list with pharmacy logos, product pictures and prices and some service promise that differentiates the pharmacy from others. Pharmacies should be listed according to product price and availability and maybe with the option to search for according to pharmacy location.

According to this study, online pharmacies should invest on properly working, real-time chat-service and proper product information at their web sites as well as clear, easy-to-

use websites. In addition, customers appeared to appreciate reasonably priced and quick (home) delivery. Advertising of their services cannot be overemphasized especially while the use of their services is not that widespread yet.

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APPENDIX 1 Questionnaire for the survey

Arvoisa lukija

Opiskelen farmasiaa Helsingin yliopistossa. Kysely on osa pro Gradu -tutkielmaani, jossa tutkitaan ilman reseptiä saatavien lääkkeiden eli itsehoitolääkkeiden ostoa verkkoapteekeista ja ostoon vaikuttavia tekijöitä. Tutkimuksesta saatujen tietojen avulla itsehoitolääkkeiden ostoprosessia internetin välityksellä voidaan kehittää paremmin kuluttajan tarpeita vastaavaksi.

Tutkimukseen osallistuminen on täysin vapaaehtoista ja vastauksia käsitellään ehdottoman luottamuksellisesti. Vastaajan henkilötietoja ei käsitellä vastausten yhteydessä. Aineisto käsitellään tilastollisin menetelmin, eikä yksittäisen henkilön vastauksia voi erottaa tuloksista. Tutkimus suoritetaan yhteistyössä lääketeollisuuden yrityksen kanssa.

Kyselyyn vastaaminen

Kysely on tarkoitettu yli 18 vuotiaille pääkaupunkiseudulla (Espoo, Helsinki, Kauniainen, Vantaa) asuville henkilöille. Kysely sisältää sekä avoimia, että suljettuja kysymyksiä. Luettehan kysymykset huolella, ja valitsette omaa mielipidettänne parhaiten kuvaavan vaihtoehdon/vaihtoehdot tai kirjoitatte vastauksenne sille varattuun tekstikenttään. Kyselyssä termi itsehoitolääke tarkoittaa apteekista ilman reseptiä saatavaa lääkettä.

Muistakaa painaa kyselyn viimeisellä sivulla "Valmis"-painiketta, jotta vastauksenne tallentuvat.

Kyselyyn vastaaminen vie aikaa noin 10-15 minuuttia ja vastanneilla on mahdollisuus osallistua arvontaan. Arvonnan palkintona on 50 euron arvoinen Stockmannin lahjakortti. Arvonta suoritetaan kyselyn päätyttyä ja voittajaan otetaan henkilökohtaisesti yhteyttä palkinnon toimittamiseksi.

Tämän kyselyn lisäksi tutkimukseen kuuluu haastatteluja. Mikäli olette kiinnostuneita osallistumaan myös haastatteluun, voitte jättää yhteystietonne kyselyn lopuksi. Yhteystietojen jättäminen ei sido teitä mihinkään, vaan haastatteluista sovitaan erikseen.

Vastauksenne on erittäin tärkeä tutkimuksen ja pro Gradu -tutkielman onnistumisen kannalta.

Lisätiedot
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Kunnioittaen

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proviisoriopiskelija

Ilman reseptiä saatavien lääkkeiden ostaminen internetistä

Kysely kuluttajille
Tietosuojaseloste

Taustatiedot

Sukupuoli
- ◯ Mies
- ◯ Nainen
- ◯ Muu

Syntymävuosi (XXXX)

Korkein koulutus
- ◯ Peruskoulu, kansakoulu tai keskikoulu
- ◯ Ammatillinen perustutkinto, ammattikoulu
- ◯ Ylioppilas
- ◯ Opistoasteen ammatillinen tutkinto
- ◯ Ylempi opistoasteen koulutus, ammattikorkeakoulu, yliopisto
- ◯ Lisensiaatti, tohtori, dosentti
- ◯ Jokin muu, mikä?

Ammattiasemanne?
- ◯ Johtava asema
- ◯ Ylempi toimihenkilö / Asiantuntija / Opettaja
- ◯ Alempi toimihenkilö
- ◯ Työntekijä
- ◯ Maatalousyrittäjä
- ◯ Yrittäjä
- ◯ Eläkeläinen
- ◯ Opiskelija/Koululainen
- ◯ Kotiäiti / Koti-isä
- ◯ Työtön
- ◯ Muu

Asuinpaikka (Kaupunki)

Kuinka paljon ovat vuotuiset tulonne ennen veroja?
- ◯ alle 20 000 euroa / vuosi
- ◯ 20 000 - 35 000 euroa / vuosi
- ◯ 35 001 - 50 000 euroa / vuosi
- ◯ 50 001 - 85 000 euroa / vuosi
- ◯ 85 001 - 100 000 euroa / vuosi
- ◯ yli 100 000 euroa / vuosi
- ◯ En osaa sanoa

Millainen on elämäntilanteenne?
- ◯ Asun kotona vanhempieni kanssa
- ◯ Asun yksin
- ◯ Asun puolisoni kanssa
- ◯ Asun taloudessa, jossa on lapsia
- ◯ Muu

Seuraava >>

Ilman reseptiä saatavien lääkkeiden ostaminen internetistä

Kysely kuluttajille

Tietosuojaseloste

Internetin käyttö ja Itsehoitolääkkeiden hankinta

Kuinka paljon aikaa vietätte internetissä vapaa-ajallanne?

(yhteensä mobiili- tai muilla laitteilla)

- ○ Yli 2 tuntia päivässä
- ○ Noin tunnin päivässä
- ○ 1-2 tuntia viikossa
- ○ Vähemmän kuin tunnin viikossa
- ○ En käytä internetiä

Oletteko ostaneet tavaroita tai palveluja internetistä?

(Yleisesti, riippumatta tuotteesta tai palvelusta).

- ○ En koskaan, enkä ostaisi
- ○ En koskaan, mutta voisin harkita
- ○ Olen ostanut kerran tai kaksi
- ○ Ostan joitakin kertoja vuodessa
- ○ Ostan kuukausittain
- ○ Ostan viikottain

Kuinka usein ostatte itsehoitolääkkeitä eli ilman reseptiä saatavia lääkkeitä?

(ostopaikasta riippumatta)

- ○ Vähintään kerran viikossa
- ○ Muutaman kerran kuukaudessa
- ○ Kerran kuukaudessa
- ○ Muutaman kuukauden välein
- ○ Muutaman kerran vuodessa tai harvemmin

Arvioi, kuinka paljon lähimpään apteekkiin on kotoanne matkaa kilometreinä?

Tiesittekö, että lääkkeitä voi ostaa myös verkkoapteekeista?

- ○ Kyllä
- ○ Ei

Oletteko ostanut lääkkeitä verkkoapteekista?

- ◉ En koskaan, enkä ostaisi
- ○ En koskaan, mutta voisin harkita
- ○ Olen ostanut kerran tai kaksi
- ○ Ostan joitakin kertoja vuodessa
- ○ Ostan kuukausittain
- ○ Ostan viikottain

Oletteko ostanut verkkoapteekista muita apteekin tuotteita kuin lääkkeitä

(esim. vitamiinit, perusvoiteet, apteekkikosmettikka)?

- ○ En koskaan, enkä ostaisi
- ○ En koskaan, mutta voisin harkita
- ○ Olen ostanut kerran tai kaksi
- ○ Ostan joitakin kertoja vuodessa
- ○ Ostan kuukausittain
- ○ Ostan viikottain

<< Edellinen | Seuraava >>

Ilman reseptiä saatavien lääkkeiden ostaminen internetistä

Kysely kuluttajille

Tietosuojaseloste

Lääkeinformaation hankinta

Keneltä tai mistä hankitte tietoa ilman reseptiä saatavista lääkkeistä ennen lääkkeen hankintaa?

Valitse ensisijainen vaihtoehto

- ○ Lääkäri
- ○ Apteekkihenkilökunta
- ○ Internet
- ○ Ystävä/perheenjäsen
- ○ Muu, mikä?

Arvioi seuraavia lääkeinformaation hankintaan liittyviä väittämiä

	täysin eri mieltä	jokseenkin eri mieltä	ei samaa eikä eri mieltä	jokseenkin samaa mieltä	täysin samaa mieltä	En osaa sanoa / ei kokemusta
Pystyn löytämään internetistä tietoa itsehoitolääkkeistä	○	○	○	○	○	○
Minulle on tuttua etsiä internetistä tietoa itsehoitolääkkeistä	○	○	○	○	○	○
Minun on vaikea löytää internetistä tietoa itsehoitolääkkeistä	○	○	○	○	○	○
Internetin avulla voin saada hyödyllistä tietoa itsehoitolääkkeistä	○	○	○	○	○	○
Osaan erottaa, mikä internetistä löytämäni lääketieto on luotettavaa	○	○	○	○	○	○
Koen löytäväni internetistä riittävästi tietoa itsehoitolääkkeistä	○	○	○	○	○	○

Arvioi mielikuvaanne koskien seuraavia verkkoapteekkien lääkeinformaatioon liittyviä väittämiä

	täysin eri mieltä	jokseenkin eri mieltä	ei samaa eikä eri mieltä	jokseenkin samaa mieltä	täysin samaa mieltä	En osaa sanoa / ei kokemusta
Verkkoapteekki tarjoaa ajantasaista lääkeinformaatiota	○	○	○	○	○	○
Verkkoapteekin tarjoama lääkeinformaatio on riittävää	○	○	○	○	○	○
Verkkoapteekin tarjoama lääkeinformaatio on helposti ymmärrettävässä muodossa	○	○	○	○	○	○
Verkkoapteekin tarjoama lääkeinformaatio on oleellista	○	○	○	○	○	○
Voin luottaa verkkoapteekin tarjoamaan lääkeinformaatioon	○	○	○	○	○	○

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Ilman reseptiä saatavien lääkkeiden ostaminen internetistä

Kysely kuluttajille

Tietosuojaseloste

Miksi ostitte tai ostatte verkkoapteekista perinteisen apteekin sijaan? (Valitse yksi tai useampi vaihtoehto)

- ☐ Haluan asioida kasvottomasti
- ☐ Minulla ei ole mahdollisuutta mennä perinteiseen apteekkiin koska se on liian kaukana
- ☐ Minulla ei sairauteni tai oireeni vuoksi ole mahdollisuutta mennä perinteiseen apteekkiin
- ☐ Internetistä ostaminen vie vähemmän aikaa kuin perinteisestä apteekista ostaminen
- ☐ Koen verkosta ostamisen kätevämmäksi
- ☐ En halua käyttää aikaa jonottamiseen
- ☐ Pystyn tekemään ostokset mistä ja milloin haluan
- ☐ Ystäväni, sukulaiseni, työtoverini tai perheenjäseneni on sitä mieltä, että minun pitäisi ostaa lääkkeet verkkoapteekista
- ☐ Olen tyytymätön perinteisen apteekin palveluun
- ☐ Saan enemmän tietoa tuotteista verkkoapteekista
- ☐ Verkkoapteekin valikoima on monipuolisempi
- ☐ Haluamaani lääkettä ei ole saatavilla perinteisestä apteekista
- ☐ Näin tuotteen mainoksen, ja halusin käydä ostamassa sen heti
- ☐ Hain verkkoapteekin sivuilta tietoa lääkkeestä ja tein sen perusteella ostopäätöksen heti
- ☐ Olin jo etukäteen päättänyt ostaa lääkkeen internetistä

Kertokaa omin sanoin, onko vielä jokin muu tekijä, minkä vuoksi ostatte tai ostitte lääkkeen internetistä perinteisen apteekin sijaan?

Mitä kautta päädyitte verkkoapteekin sivustolle? Voitte valita yhden tai useamman vaihtoehdon.

- ☐ Menin verkkoapteekin sivustolle suoraan
- ☐ Hakukoneen, esimerkiksi googlen avulla
- ☐ Verkkoapteekin lähettämän sähköpostin kautta
- ☐ Näin internetissä verkkoapteekin mainoksen, jota klikkasin
- ☐ Lääkealan turvallisuus ja kehittämiskeskus Fimean tarjoaman "luettelon laillisista apteekin verkkopalveluista" avulla
- ☐ Internetissä olevassa lääkemainoksessa oli linkki Fimean luetteloon laillisista verkkoapteekeista, josta valitsin apteekin
- ☐ Lääkeyrityksen verkkosivustolla oli linkki Fimean luetteloon laillisista verkkoapteekeista, josta valitsin apteekin
- ☐ Käytin suoraan saman apteekin verkkopalvelua, jossa fyysisesti asioin
- ☐ Internetissä olevassa lääkemainoksessa oli linkki sivulle, jossa oli listattu verkkoapteekeja, ja valitsin niistä
- ☐ Lääkeyrityksen verkkosivuilla oli listattu verkkoapteekkeja, joista valitsin

Kuinka paljon seuraavat tekijät vaikuttivat päätökseenne ostaa lääke internetistä?

	1= ei lainkaan	2	3	4	5= erittäin paljon
Lääkkeen mainonta internetissä	○	○	○	○	○
Lääkkeen mainonta muualla kuin internetissä (esimerkiksi TV tai radio)	○	○	○	○	○
Tuotetieto verkkoapteekin tuotesivulla	○	○	○	○	○
Tuotetieto lääkeyrityksen verkkosivulla	○	○	○	○	○
Hakukoneiden käyttö tiedonhaussa (esimerkiksi Google)	○	○	○	○	○
Internetin keskustelufoorumit	○	○	○	○	○
Läheisen ihmisen mielipide, suositus tai kokemus	○	○	○	○	○

Miten tyytyväinen olitte...

	erittäin tyytymätön	jokseenkin tyytymätön	ei tyytymätön eikä tyytyväinen	jokseenkin tyytyväinen	erittäin tyytyväinen	en osaa sanoa
tilauksen tekemiseen verkkoapteekin kautta?	○	○	○	○	○	○
verkkoapteekin tarjoamaan lääkeinformaatioon?	○	○	○	○	○	○
tilauksen toimitusnopeuteen?	○	○	○	○	○	○
saamaasi asiakaspalveluun?	○	○	○	○	○	○
toimituksen hintaan?	○	○	○	○	○	○
tilauksen toimitukseen?	○	○	○	○	○	○
yleisesti kokemukseesi ostaa lääkkeitä internetistä?	○	○	○	○	○	○

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Ilman reseptiä saatavien lääkkeiden ostaminen internetistä

Kysely kuluttajille

Tietosuojaseloste

Mikä estää teitä ostamasta itsehoitolääkkeitä internetistä? Valitkaa yksi tai useampi vaihtoehto.

- ☐ En tiennyt, että lääkkeitä voi ostaa verkkoapteekista
- ☐ Saan tuotteen helposti perinteisestä apteekista, en näe lisäarvoa verkkoapteekkiostamisessa
- ☐ En luota verkkoapteekkeihin
- ☐ Lääkkeen tilaaminen verkkoapteekista on liian monimutkaista
- ☐ Henkilökohtaisen palvelun puute
- ☐ En voi varmistua siitä, sopiiko lääke yhteen muun lääkitykseni kanssa
- ☐ Pelkään, että henkilökohtaisia tietojani pääsee vuotamaan
- ☐ Pelkään, että terveystietojani pääsee vuotamaan
- ☐ Toimitusmaksu on liian kallis
- ☐ Verkkoapteekissa ei ole haluamaani toimitustapaa
- ☐ Toimitusaika on liian pitkä
- ☐ Pelkään että luottokorttitietoni pääsevät vuotamaan
- ☐ Verkkoapteekin tuotevalikoima on liian suppea
- ☐ Minun on vaikea valita oikeaa tuotetta laajan valikoiman vuoksi
- ☐ Minun on vaikea valita oikeaa tuotetta liian vähäisen tuotetiedon vuoksi
- ☐ Verkkoapteekki ei tukenut mobiililaitetta

Kertokaa omin sanoin, onko vielä jokin muu tekijä, minkä vuoksi ette halua ostaa itsehoitolääkettä internetistä?

Kertokaa omin sanoin, mitkä tekijät voisivat saada teidät ostamaan tai harkitsemaan itsehoitolääkkeiden ostamista verkkoapteekista?

<< Edellinen | Seuraava >>

Ilman reseptiä saatavien lääkkeiden ostaminen internetistä

Kysely kuluttajille

Tietosuojaseloste

Verkkoapteekkiostamiseen liittyvät hyödyt ja riskit

Arvioi seuraavia lääkkeiden internetistä ostamiseen liitettyjä mahdollisia riskejä

	täysin eri mieltä	jokseenkin eri mieltä	ei samaa eikä eri mieltä	jokseenkin samaa mieltä	täysin samaa mieltä	en osaa sanoa
Pelkään, että maksutietoni eivät pysy suojassa	○	○	○	○	○	○
Pelkään, että henkilötietojani käsitellään ei-toivotulla tavalla	○	○	○	○	○	○
Pelkään, että verkkoapteekista ostetut lääkkeet ovat väärennettyjä tai huonolaatuisia	○	○	○	○	○	○
Minua huolettaa, etten saa oikeaa lääkettä virheellisen toimituksen vuoksi	○	○	○	○	○	○
Pelkään, että verkkoapteekista ostetut lääkkeet ovat vahingollisia terveydelleni	○	○	○	○	○	○
Pelkään, etten saa riittävästi tietoa lääkkeiden oikeasta käytöstä	○	○	○	○	○	○
Minua huolettaa, että lääkitykseni yhteensopivuutta ei voida varmistaa	○	○	○	○	○	○

Arvioi seuraavia lääkkeiden internetistä ostamiseen liitettyjä mahdollisia hyötyjä

	täysin eri mieltä	jokseenkin eri mieltä	ei samaa eikä eri mieltä	jokseenkin samaa mieltä	täysin samaa mieltä	en osaa sanoa
Tilaamalla verkkoapteekista voin vähentää ostamiseen kuluvaa aikaa	○	○	○	○	○	○
Arvostan, että minun ei tarvitse keskustella farmaseutin kanssa kasvotusten tilanteestani	○	○	○	○	○	○
Arvostan, että voin tehdä ostoksia mihin vuorokauden aikaan tahansa ja mistä tahansa.	○	○	○	○	○	○
Internetistä ostaminen on vaivattomampaa perinteiseen apteekkiin verrattuna	○	○	○	○	○	○
Tuotteiden ja hintojen vertailu on nopeampaa ja helpompaa kuin apteekissa	○	○	○	○	○	○
Saan enemmän tietoa lääkkeistä perinteiseen apteekkiin verrattuna	○	○	○	○	○	○
Voin ostaa tuotteita, joita en löydä muualta	○	○	○	○	○	○
Saan luotettavaa asiakaspalvelua verkkoapteekkia käyttämällä	○	○	○	○	○	○

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Tietosuojaseloste

Verkkoapteekissa asiointi

Arvioi, asteikolla 1-5, Kuinka paljon seuraavat seikat vaikuttavat halukkuuteenne tehdä ostoksia verkkoapteekissa?

	1= ei lainkaan	2	3	4	5= erittäin paljon
Tilaaminen on helppoa	○	○	○	○	○
Verkkoapteekki tarjoaa useita eri maksutapavaihtoehtoja	○	○	○	○	○
Sivustolla on kattava tieto lääkkeestä ja sen käytöstä	○	○	○	○	○
Verkkoapteekissa on selkeät tuotekuvat	○	○	○	○	○
Yhteydenotto verkkoapteekin asiantuntijaan on helppoa	○	○	○	○	○
Tilaus- tai toimitusvahvistuksen saaminen	○	○	○	○	○
Mahdollisuus tilauksen seurantaan	○	○	○	○	○
Pienet toimituskustannukset	○	○	○	○	○
Lyhyt toimitusaika	○	○	○	○	○
Verkkoapteekin perinteinen, fyysinen myymälä (eli apteekki), sijaitsee läheläni	○	○	○	○	○
Verkkoapteekin yleinen visuaalinen ilme	○	○	○	○	○
Verkkoapteekkisivustoa on helppo käyttää	○	○	○	○	○
Verkkoapteekin tuotevalikoima on laaja	○	○	○	○	○
Verkkoapteekki tarjoaa useita eri toimitustapavaihtoehtoja	○	○	○	○	○
Voin tilata tuotteen myös muualle kuin kotiini (esimerkiksi työpaikalle)	○	○	○	○	○

Mikä auttaisi teitä tekemään päätöksen ostaa lääke verkkoapteekista perinteisen apteekin sijaan? Valitkaa yksi tai useampi vaihtoehto

- ☐ Itsehoitolääkkeen hinta verkkoapteekissa olisi edullisempi kuin perinteisessä apteekissa
- ☐ Mahdollisuus reaaliaikaiseen neuvontaan verkkoapteekissa, esimerkiksi chat-palvelun avulla
- ☐ Tuotetieto lääkeyrityksen verkkosivuilla
- ☑ Mahdollisuus reaaliaikaiseen keskusteluun lääkeyrityksen verkkosivulla, esimerkiksi chat-palvelun avulla
- ☐ Lääkeyrityksen verkkosivulta/tuotesivulta löytyvä suora linkki verkkoapteekkiin
- ☐ Linkki lääkeyrityksen tuotesivustolle verkkoapteekista
- ☐ Internetissä olevasta lääkemainoksesta suora linkki verkkoapteekkiin
- ☐ Internetissä olevasta lääkemainoksesta linkki tuotesivulle, josta myös ostomahdollisuus
- ☐ Lääkkeen hinta- ja toimitustiedot näkyvillä jo lääkeyrityksen tuotesivulla
- ☐ Haettaessa tietoa internetistä (esimerkiksi googlen avulla) linkki lääkkeen tuotesivulle, josta myös ostomahdollisuus
- ☐ Haettaessa tietoa internetistä (esimerkiksi googlen avulla) linkki verkkoapteekkiin
- ☐ Lisäpalvelut, kuten mahdollisuus lääkkeen toimitukseen yhdessä esimerkiksi ruokakaupan verkko-ostosten kanssa
- ☐ Muu

Mikäli valitsitte edellisessä kysymyksessä kohdan Muu, tarkentakaa tähän.

Miten todennäköisenä pidätte, että

	erittäin epätodennäköistä	jokseenkin epätodennäköistä	ei epätodennäköistä eikä todennäköistä	jokseenkin todennäköistä	erittäin todennäköistä
Ostatte lääkkeitä internetistä tulevaisuudessa?	○	○	○	○	○
Suosittelette lääkkeiden ostoa internetistä teille tärkeälle ihmiselle (esimerkiksi perheenjäsen, ystävä, sukulainen, työtoveri)	○	○	○	○	○

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Kiitos osallistumisestanne kyselyyn! Lopuksi voitte esittää vapaasti näkemyksiänne tutkimukseen tai apteekkiverkkokauppaan liittyen

Mikäli haluatte osallistua arvontaan, jättäkää tähän yhteystietonne. Palkintona on 50 euron arvoinen lahjakortti Stockmannille. Yhteystietoja ei käytetä muuhun kuin arvonnan suorittamiseen ja palkinnon toimittamiseen, eikä niitä voi yhdistää vastauksiinne. Yhteystietoja ei säilytetä vaan ne hävitetään kun arvonta on suoritettu.

Puhelinnumero

Sähköpostiosoite

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Halukkuus osallistua haastatteluun

Tämän kyselyn lisäksi tutkimukseen kuuluu haastattelu, jossa syvennetään kyselylomakkeessa käsiteltyjä asioita ja jonka avulla saadaan arvokasta lisätietoa tutkimusaiheesta.
Mikäli olisitte halukas osallistumaan haastatteluun, jättäkää tähän yhteystietonne. Yhteystietojen jättäminen ei sido teitä vielä mihinkään, vaan haastattelusta sovitaan erikseen. Yhteystietoja käytetään ainoastaan haastatteluun kutsumiseen, ja ne hävitetään tutkimuksen päätyttyä. Mikäli haastatteluun on enemmän halukkaita kuin voin haastatella, valitaan haastateltavat arpomalla.

Puhelinnumero

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Kiitokset arvokkaista tiedoista ja tärkeistä mielipiteistänne!

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Kysely kuluttajille

Olet nyt vastannut kaikkiin kysymyksiin. Jos haluat vielä palata muuttamaan vastauksiasi, paina Edellinen.
Vastauksesi tallentuvat painettuasi Valmis etkä pääse enää muuttamaan niitä.
Kiitos vastauksestasi!

Tietojen lähetys

<< Edellinen | Valmis